FREMONT GENERAL PLAN

ADOPTED MAY 7, 1991
Amended 12/8/92

RESOLUTION NO. 8080

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF FREMONT ADOPTING AN UPDATED GENERAL PLAN CERTIFYING A PROJECT EIR, AND ADOPTING FINDINGS OF FACT AND A STATEMENT OF OVERRIDING CONSIDERATIONS

WHEREAS, following careful study and the holding of public hearings, and aided by substantial input from the Citizens Advisory Committee and concerned citizens, and after substantial consideration of alternatives, the Planning Commission recommended to this City Council on April 10, 1991 the adoption of a comprehensive update to the General Plan for the City and certification of the EIR prepared for the project; and

WHEREAS, the Planning Commission further recommended the Preferred Alternative land use plan to this City Council; and

WHEREAS, this City Council has considered findings relating to the housing element of the General Plan as made by the State Department of Housing and Community Development and finds that the housing element of the General Plan has been drafted to be consistent with these findings; and

WHEREAS, this City Council has in several study sessions carefully considered the comprehensive update to the General Plan recommended by the Planning Commission and has noticed and held the required public hearing, and

WHEREAS, this City Council has modified the comprehensive General Plan as recommended by the Planning Commission and finds that all such modification is either not substantial or was previously considered by the Planning Commission; and

WHEREAS, proposed Findings of Fact and Statements of Overriding Consideration as set forth in Exhibit 1 and incorporated herein by reference, have been prepared for and reviewed by this City Council in accordance with CEQA Guidelines Sections 15091, 15092, and 15093; and

WHEREAS, the proposed General Plan has been prepared in conformance with State Planning and Zoning Law (Government Code sections 65000-66003), has and has been considered pursuant to the California Environmental Quality Act ("CEQA") (Public Resources Code sections 21000-21177); and

WHEREAS, this City Council finds that the comprehensive General Plan update as recommended by the Planning Commission and as modified by this City Council contains all elements required to be included as well as additional, optional matters permitted to be included and that the comprehensive General Plan update provides a suitable and logical plan for the further development of the City;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Fremont as follows:

1. The Final EIR for the revised General Plan has been completed in compliance with CEQA, and has been reviewed and considered by the City Council prior to approving the proposed General Plan; and

2. The proposed Findings of Fact and Statements of Overriding Consideration, attached as Exhibit 1, have been reviewed and considered by this City Council, and are hereby adopted as this City Council's Findings of Fact and Statements of Overriding Consideration; and

3. The document consisting of maps, charts and a report entitled "Draft Fremont General Plan", dated April, 1991 and recommended for adoption by the Planning Commission is, as amended by this City Council, adopted as the General Plan of the City of Fremont, and the previous General Plan is superseded in its entirety.

4. If any provision of the General Plan is or the application thereof to any person or circumstance is held

invalid, that invalidity shall not affect other provisions or applications of the General Plan which can be given effect without the invalid provision or application, and to this end the provisions of the General Plan are severable.

ADOPTED at the meeting of May 7, 1991 * by the City Council of the City of Fremont by the following vote, to wit:

AYES: Mayor Ball, Councilmembers Dutra, Loisel, Roessler

NOES: Councilmember Mello

ABSTAINED: None

ABSENT: None

BILL BALL
Mayor

ATTEST:

SHARON WHITTEN
City Clerk

APPROVED AS TO FORM:

LYLE L. LOPUS
Assistant City Attorney

* Actual adoption occurred in the early morning of May 8, 1991.

I HEREBY CERTIFY THAT THE ABOVE IS A TRUE AND CORRECT COPY OF A DOCUMENT IN THE FILES OF THE CITY OF FREMONT.

Kathleen Gonzales
DEPUTY CITY CLERK

Fremont General Plan

May 7, 1991

Table of Contents

List of Tables

Page

Chapter 9 – Natural Resources

Chapter 10 – Health and Safety

List of Figures

Chapter 10 – Health and Safety

Chapter 1
Introduction to the Fremont General Plan

WHAT IS A GENERAL PLAN?

The General Plan has been described as the "Constitution" for a city's development: the foundation upon which all development decisions are to be based. Each city and county is required by State law to have a General Plan. It contains goals for the City's development and the implementation measures which will move the City towards achievement of those goals. It is the official policy of the City of Fremont regarding the future character and quality of development.

A General Plan is also a guide to decision making. The ordinances and regulations adopted to guide private and public development must be consistent with and implement the General Plan. The zoning ordinance, development standards, exactions, public capital improvements and other City development actions must all be consistent with the General Plan.

THE FREMONT GENERAL PLAN

The Fremont General Plan establishes a vision for the community, grounded in its history and current condition, and looking forward to what it hopes for the next century. Fremont is well positioned to take advantage of the opportunities of the 21st century. Located in a thriving region with land, infrastructure and services sufficient to support a high quality of life, Fremont has the tools it needs to shape the future to match its vision.

This General Plan begins where the previous General Plan left off. The community envisioned by the 1969 General Plan is now largely built. This plan must maintain the quality of life already achieved, while moving forward to accomplish many of the goals unmet from the previous plan: a flourishing downtown, more jobs to match an existing resident workforce, and thriving commercial centers. This plan also addresses many challenges facing American cities in the 1990s: meeting the need for a satisfactory transportation system, affordable housing, a clean environment, and access to open space and recreation.

CONTENT AND ORGANIZATION

The General Plan must reflect local concerns and local goals. Fremont's plan is a product of the deliberations of the citizens and elected leaders of the City. While the city's direction is determined by Fremont, the issues that must be considered in the Plan are partially determined by the State. State legislation refers to seven topics -- called Elements -- which must be considered in the General Plan. Cities are not required to organize their General Plan by these "elements" so long as each issue is covered. The City of Fremont has chosen to organize its plan by Chapters, roughly corresponding to the elements as follows:

Land Use Element: Land Use Chapter
Circulation Element: Transportation and Public Facilities Chapters
Housing Element: Housing Chapter
Conservation Element: Natural Resources Chapter
Open Space Element: Parks and Open Space Chapter
Noise Element: Health and Safety Chapter
Safety Element: Health and Safety Chapter

In addition, the Plan includes a "Local Economy" Chapter describing the City's economic development strategy. Finally, the overall vision of the City is set forth in Chapter 2, Fundamental Goals. These Fundamental Goals, taken together, constitute a vision for the City in twenty years.

Each Chapter includes a background section describing existing conditions ("Setting") and a description of expectations for the future ("Projection"). These background sections summarize Background Reports which provide further technical detail and support for most chapters. Finally, each Chapter includes a section which describes the City's goals and objectives, and the policies and implementation measures which it intends to follow to achieve its goals and objectives. Goals are statements of aspirations held by the community; they are ideal end-states which are not always achievable. Objectives are intermediate steps towards the goal and are meant to be achievable in the ten to twenty year time frame of the Plan. Policies provide clear direction for decision making; they indicate the City's approach to meeting the objective. Finally, implementation measures are those specific actions and programs the City intends to undertake in the near term (usually in the next five years) to achieve the objective.

USING THE GENERAL PLAN

The Fremont General Plan is a comprehensive, long term plan. It is an internally consistent statement of the official development policy of the City of Fremont. It includes a land use and transportation diagram and text which set forth the objectives and policies to guide public and private development decisions. It meets the minimum requirements and intent of the California Government Code (Section 65300).

The Plan diagrams illustrate existing and planned land use, streets, trails and other facilities. The illustration of such facilities should not be construed as allowing public use or access on private land.

It is organized to meet the varying needs of the members of the community. A General Plan must serve several purposes depending on the needs and purposes of the user.

A vision of the future. Residents and businesses who desire more information about Fremont as a community and its plans for the future will review the General Plan for that vision, articulated in the goals and objectives, and especially the Fundamental Goals in Chapter 2.

A guide to private development. People interested in developing in Fremont will primarily use the land use diagrams and policies, although each Chapter may contain additional information necessary for private development decisions.

A guide to decision making. The City Council and Planning Commission will use the document as a whole in their decision making regarding development, capital improvements, and priorities. City Staff will review each development project within the City for conformance with appropriate goals, objectives and policies of the City.

Implementation. A General Plan is not simply a guide for how to respond to the initiatives of others. It is a statement of how the City intends to bring about the future it desires. The implementation measures indicate those actions the City intends to take in the next five to ten years to achieve its goals.

DEVELOPMENT OF THE GENERAL PLAN

The General Plan update process began in May, 1989 with the appointment of a Citizens Advisory Committee (CAC) charged with formulating draft goals and objectives for land use and transportation. A 25 member committee was initially appointed; 23 members saw the project through to completion. Applications for membership on the CAC were sent to every household and business in Fremont and over 300 applications were received.

The CAC completed a "Concept Report" for the General Plan in November, 1989 and passed it's recommendations on to the Planning Commission. Between November, 1989 and August, 1990, the Planning Commission considered the recommendations of the CAC and, working closely with Staff, prepared a Preliminary Draft General Plan (PDGP). Two public hearings were held on the PDGP in September, 1990. The City Council reviewed the PDGP in a series of Study Sessions between September and January, 1991, and returned their comments to the Planning Commission. In February, 1991 the Planning Commission reviewed the City Council's comments as well as those of the public and made modifications in the first Preliminary Draft. In March, 1991 the Planning Commission issued a second Preliminary Draft

General Plan (PDGP II), and received additional public comment before recommending a Draft Plan to the City Council. The City Council held additional public hearings, made additional modifications in the Draft Plan and adopted the General Plan on May 7, 1991.

Chapter 2
Fundamental Goals

Fremont was incorporated in 1956. Its boundaries included five smaller towns (Centerville, Irvington, Mission San Jose, Niles and Warm Springs) and thousands of acres of farmland, open hills, salt ponds, marshes and other vacant land. In the past 34 years, much of the city envisioned by the city's founders has been built. Its original five towns (now called districts) have grown, and new community areas have been added. Today (1990), Fremont is the fourth most populous city in the nine-county Bay Area. Due to the size of the city, it is divided into ten "Planning Areas": Baylands, Centerville, Central, Industrial, Irvington, Mission San Jose, Niles, Northern Plain, Warm Springs and Hill Planning Area.

Fremont's original large supply of residential land now holds a diverse and high quality housing stock. Fremont's industrial area has begun to fill with a wide range of industries including a variety of high technology firms, a vehicle assembly plant, warehousing and distribution businesses. The City's central business district, originally an area of farms and marshes, now holds over a million square feet of offices, another million square feet of retail space, two major medical facilities and a wide variety of other businesses. The city's Central Park, with Lake Elizabeth at its center, has become a symbol of Fremont's commitment to a high quality life for its residents. Despite this rapid change and development, Fremont has also managed to preserve a significant portion of its natural heritage within its frame of open space: hills in the east, Baylands in the west, and creek and farms on the north.

While Fremont has achieved many of the goals originally envisioned for it, many are yet to be achieved. In the preparation of this General Plan, the City has taken stock of what has been accomplished, and what remains to be done. It has looked ahead 20 years to determine what it wants to be and what it believes it can be. In this Chapter, that vision is distilled into a few "Fundamental Goals," most of which reaffirm and carry forward the direction established for the city in its first General Plan.

The vision of Fremont's future is tempered by what it is today, and what it expects for the future. To provide a context for the City's plan, each of the chapters in this General Plan begins with a description of today ("Setting") and a forecast for its future ("Projection"). Likewise, Fremont's Fundamental Goals are based on some broad assumptions about the future of Fremont and its role in the region. These include the following:

1. **Housing Growth.** Fremont will continue to attract new housing development of all types. The underlying demand for housing in the Bay Area is strong and will virtually exhaust Fremont's supply of vacant land for housing in the next 20 years. As the supply of vacant land dwindles, underutilized parcels of land and smaller vacant parcels that were passed

over in the past due to some constraint will be "filled in." Residential development will not cease in the next twenty years, but will slow significantly before the turn of the century.

2. **Employment Growth.** Fremont's prime location in the region will continue to make it an important location for employment growth. The Association of Bay Area Governments (ABAG) projects a 71 percent increase in jobs in fifteen years.

   If ABAG's projection is accurate, Fremont will continue to have sufficient vacant industrial land for continued employment growth well into the next century. However, there are uncertainties affecting new employment growth which could lead to considerably more or less employment growth in Fremont than projected by ABAG. The ability of the Bay Area to supply housing for workers, and the health of high technology industries are two of the key variables that will affect Fremont's future economic development. Despite rapid employment growth, Fremont is still projected to have a large surplus of workers who live here relative to the number of jobs here in 2005.

3. **High Housing Cost.** The days when the median income of one wage earner was enough to purchase a single family home in the Bay Area are over and unlikely to return. Housing costs in the Bay Area are likely to remain high. People who are able to purchase homes in Fremont will be increasingly two-earner households with well-paying jobs. The high cost of housing may affect future employment growth due to higher employee costs and an overall lack of available housing. Fremont must weigh the region's need for more housing with its desire for a reduction in its current imbalance between jobs and housing. Today there is an estimated 1.74 workers who live in Fremont for every job in the city.

4. **Traffic.** The economic and environmental costs of the automobile make it imperative for the city and the region to make a commitment to developing alternatives to the automobile, and especially to reducing the number of single occupant autos at peak times.

5. **Pressure on Open Space.** As vacant land supplies dwindle in Fremont and elsewhere in the southeast Bay, there will be growing pressure to develop open space and environmentally sensitive lands, and especially Fremont's hills. Land previously thought to be too expensive or too difficult to develop due to environmental constraints (such as steep slopes or earthquake faults) will be increasingly attractive sites for new development.

FUNDAMENTAL GOALS

Taken as a whole, the following Fundamental Goals are the vision for Fremont's future. Each is essential to the future of the city; **no single one is more important than another**. They are the foundation upon which the rest of this General Plan is built.

F-1 FREMONT AS A CITY OF QUALITY AND DISTINCTION

Maintaining the existing characteristics that make Fremont a special place with a high quality of life is clearly the primary job of this General Plan. The stress on "quality" carries forward the City's past insistence on high standards for design and construction in all development. "Distinction" carries forward the concept of maintaining Fremont's unique elements, including its history, its open space frame and its separate identity from its neighbors.

F-2 AN HARMONIOUS BLEND OF THE NATURAL AND BUILT ENVIRONMENTS

Fremont's blending of the natural and built environment is a special aspect of its character. Fremont residents are never far from the natural environment: it is found in Central Park, the bike and hiking trails, Ardenwood Regional Park, the Wildlife Refuge, and in the open hills. Many developments have also successfully integrated aspects of the natural within the development. Achieving a blend means the natural environment is planned as an integral part of the city's character. This goal also implies that development located near natural areas should not overwhelm the latter, or have a significant negative affect upon them.

An "harmonious blend" also implies fitting the new into the old. In the future, new development will seldom be on a piece of undeveloped land with little or nothing around it, but in the midst of an existing developed area. Fitting new development into the old requires continuing careful review of development proposal to ensure that new housing is not wrenchingly different from its neighbor, and sensitive transitions are provided from use to use, and from lower densities to higher densities.

F-3 A CITYSCAPE WITH AN OPEN FEELING

In trying to describe what is special about Fremont as a place to live, the words "open feeling" often arise. That open feeling is hard to define, but generally it refers to several of the physical characteristics of Fremont that together create a sense of openness. Those characteristics include the open space within the city; the accessibility of open space in the hills and baylands; the views to the hill face the Bay, and Mission Peak; the "low-rise" nature of most residential neighborhoods ; the wide boulevards and landscaping.

Maintaining that open character does not mean that taller buildings cannot be built. It does imply that the elements contributing to the open feeling need to be conserved: the hill face, the views, the open space integrated into development, the parks and the landscaped boulevards. To the degree that increased densities are permitted, they should be focused in certain areas, while leaving the remainder of the city in its current "open" state.

F-4 AN INCLUSIVE COMMUNITY THAT WELCOMES PEOPLE OF DIFFERENT AGES, ETHNICITY, AND INCOME

Fremont is a diverse community, ethnically, racially, economically and socially. It is this diversity that makes Fremont a more cosmopolitan and exciting place, a unique city rather than just another homogenous suburb. Retaining diversity will not be easy in the face of increasing housing costs. The City must continue to plan for opportunities for people to live here.

F-5 A VIBRANT, WELL DEFINED, VISUALLY DISTINCTIVE CENTRAL BUSINESS DISTRICT AS THE FOCUS OF THE CITY'S GOVERNMENTAL, CULTURAL AND COMMERCIAL ACTIVITY

As a major city, Fremont needs a downtown that is a cultural and business center, with an intensity of development suitable to support an active pedestrian environment. It should be an identifiable area with public spaces where people can meet. Such a downtown is an achievable goal -- and a very important one.

F-6 A UNIFIED CITY WITH THRIVING DISTRICTS AND EMERGING COMMUNITIES, EACH WITH ITS OWN IDENTITY

Each of the city's original historic districts and emerging community areas is unique and important to Fremont's character as a city. Preserving and enhancing the unique identities of each of the city's areas does not preclude identification with the city as a whole. Fremont's identity as a city will grow as it develops a distinctive "downtown" and as it continues to develop its own city-wide cultural identity and history.

F-7 AN OPEN SPACE FRAME THAT INCLUDES THE HILLFACE, BAY WETLANDS AND GATEWAYS

It is Fremont's open space frame -- including its hill face, wetlands and Bay -- that set it apart and make it a special place to live. These open areas are also the gateways to Fremont.

F-8 A DIVERSITY OF RESIDENTIAL, RECREATIONAL, CULTURAL, EMPLOYMENT AND SHOPPING OPPORTUNITIES

This goal reaffirms the original vision of Fremont's early leaders of a complete city. Fremont has gone a long way toward achieving that goal, and will continue to encourage commerce and industry, promote a diversity of shopping, recreational and cultural opportunities, and meet the diverse residential needs of all Fremont residents. To ensure Fremont's ability to meet its social and employment goals, the City shall endeavor to provide an adequate share of diverse housing opportunities for future generations.

F-9 A LARGE, DIVERSIFIED INDUSTRIAL AND COMMERCIAL BASE TO MEET THE EMPLOYMENT NEEDS OF THE CITY'S PRESENT AND FUTURE WORKFORCE

Fremont was planned to have a large employment base so the people who live in Fremont can also work here. Although housing development in Fremont has out paced job creation in the past, in the next 15 years this imbalance is projected to be partially reversed. Between 1990 and 2005, the Association of Bay Area Governments projects Fremont's employment will increase from 55,870 to 95,400. In these days of congested roads and two-worker families, the goal of a strong employment base seems even more important today than before. It is desirable to move towards a jobs-housing balance, but it is recognized that no city can achieve this balance on its own.

F-10 PUBLIC SERVICES RESPONSIBLY MANAGED AND EQUITABLY DISTRIBUTED THROUGHOUT THE CITY

Public services must continue to be equitably distributed throughout the city. To the maximum degree feasible, all areas should be equally served by parks, fire stations, libraries, and other public facilities and services. Services and facilities should also continue to be provided in a timely and cost effective manner. Cost effective means that limited financial resources are used wisely and efficiently. It is the practice of the City to make public services available when residents need them. The City should also continue to cooperate with the School District to assure schools are appropriately located and available when they are needed.

F-11 INCREASED TRANSPORTATION ALTERNATIVES AND REDUCED DEPENDENCY ON THE AUTOMOBILE

While the auto will continue to be the dominant transportation mode for the foreseeable future, it is clear that over-dependence on the auto is not in the city's best interest. The high environmental and monetary cost of maintaining this dependency are indisputable. Fossil fuels are a finite resource that should not be squandered. The City of Fremont should promote strategies to encourage less dependence on the auto.

F-12 PARKS, RECREATIONAL FACILITIES AND OPPORTUNITIES

The availability of parks, recreational facilities and opportunities is one of the defining characteristics of Fremont's quality of life. This goal seeks to ensure that facilities are available to meet our diverse needs.

F-13 VITAL CONNECTIONS BETWEEN THE HISTORY AND HERITAGE OF THE COMMUNITY AND EVERYDAY LIFE

Fremont's heritage sets it apart and makes it unique. The City will continue to conserve its 18th, 19th and 20th Century heritage into the 21st Century. In addition, the City will continue to seek ways to enrich our everyday lives by drawing connections to the city's past.

F-14 A PROMINENT LEADERSHIP ROLE IN REGIONAL FORUMS AND IN ADDRESSING THE REGIONAL ISSUES THAT AFFECT FREMONT

It is clear all Bay Area's cities are part of a highly integrated region. Decisions made by our immediate neighbors, as well as decisions made in San Francisco and San Jose, have significant impacts on Fremont's future. Certain issues, such as regional transportation and air quality, can only be addressed in a cooperative manner. Today, more then ever, it is important for people to consider the regional impacts of local decisions.

Fremont must play a prominent role in the region, assuring that the decisions that are made promote our best interests. Fremont is the fourth most populous city in the Bay Area, and should continue to assert its position as a regional leader. We should continue to think regionally and act locally.

Chapter 3
Land Use

INTRODUCTION

The Land Use Chapter of the General Plan presents the diagrams, definitions, and policies that will guide land use decisions in the City. While there are goals unique to the Land Use Chapter, this chapter primarily translates the goals and objectives found in other chapters of this General Plan into land use designations.

Fremont is a large City with unique issues and planning concerns associated with its various sub-areas. In order to address these issues and present information more clearly, the City is divided into nine Planning Areas (See Figure 3.1):

- Baylands
- Centerville
- Central Area
- Industrial
- Irvington
- Mission San Jose
- Niles
- Northern Plain
- Warm Springs

The eastern hills of Fremont have traditionally been part of three Planning Areas: Niles, Mission San Jose and Warm Springs (see Figure 3.1). This plan continues to show parts of the hills in each of these three planning areas. However, due to the many issues involving the hills and the City's eastern boundary, this General Plan establishes a new planning area called the Hill Planning Area. The Hill Planning Area includes land currently outside of the City's eastern boundary which the City considers important to its future.

The following section describes existing land use conditions and projections. It is divided into two major sections:

- Citywide

- Planning Areas, including the Hill Planning Area. In addition to existing conditions and projections, this section also describes the intent of the General Plan for each Planning Area. This description of intent supplements the goals, objectives and policy section.

Land use goals, objectives and policies are presented in the final section of this Chapter. Land uses for each Planning Area are shown on Planning Area Land use diagrams. The summary diagram illustrates relationships between

areas of the City and provides a broad overview of land uses. However, to determine the land use designation of any particular parcel of land, full size Planning Area Land Use Diagrams should be used (available at the Community Development Department).

CITYWIDE LAND USE

Setting

The City of Fremont is planned to be a balanced City with a mixture of industry, commerce, a variety of housing types, parks and open space. Since its incorporation, Fremont has grown from five somewhat self-contained smaller communities with about 22,500 people, to a City of 172,071 people (1990 preliminary Census).

The original five towns that composed Fremont are still evident in the organization of the City. Each of the five communities, now often referred to as "districts," still contains a central commercial area, four of which have significant historic elements: Niles, Irvington, Centerville and Mission San Jose. The historic commercial center in Warm Springs has been replaced by a newer commercial area.

During the thirty-five years since incorporation, a Central Business District (CBD) has developed in the geographical center of the City, and predominantly single family homes have filled-in much of the vacant land between the historic districts. Apartments and condominiums have developed near the CBD and in other areas of the City, and a new mixed residential community of homes, apartments and condominiums (usually referred to as "Ardenwood New Town) has developed in the north-western part of Fremont, west of I-880.

Industrial development has occurred in the south western area of the City on land set aside for industrial use when the City first incorporated. Industrial and business park development has also occurred on the northwestern side of the City in an area more recently designated for industrial use west of I-880 and north of SR 84.

In addition to these developed areas of Fremont, the City has maintained an "open space frame." This frame sets the City apart from its neighbors, provides visual and physical access to the natural environment and adds to the special character of the City. The frame has been largely implemented through public action. In the east, the City is framed by its open eastern hills. Development in the Hill Area is controlled by an initiative passed in 1981. The other major element of the City's open space frame is the Baylands on the west. Much of the Baylands area is incorporated in the San Francisco Bay National Wildlife Refuge. There is no timber production in Fremont.

These elements of the City -- its residential and commercial areas and open space frame are graphically shown in Figure 3-2, and the amount of each use is summarized in Table 3-1. In most respects, the City planned twenty years ago exists today.

Table 3-1
Land Uses

	Developed, 1989	Total Acres***	Vacant Acres
Retail/Commercial	10.2 million sq. ft.	1,300	400
Industrial	25.0 million sq. ft.	6,200	2,700
Single Family Residential	42,100 units	14,000	410
Multi-Family Residential*	18,300 units		390
Open Space		26,000	
Public/Institution**	19,000 acres		
Private (Hill Area)	7,150 acres		

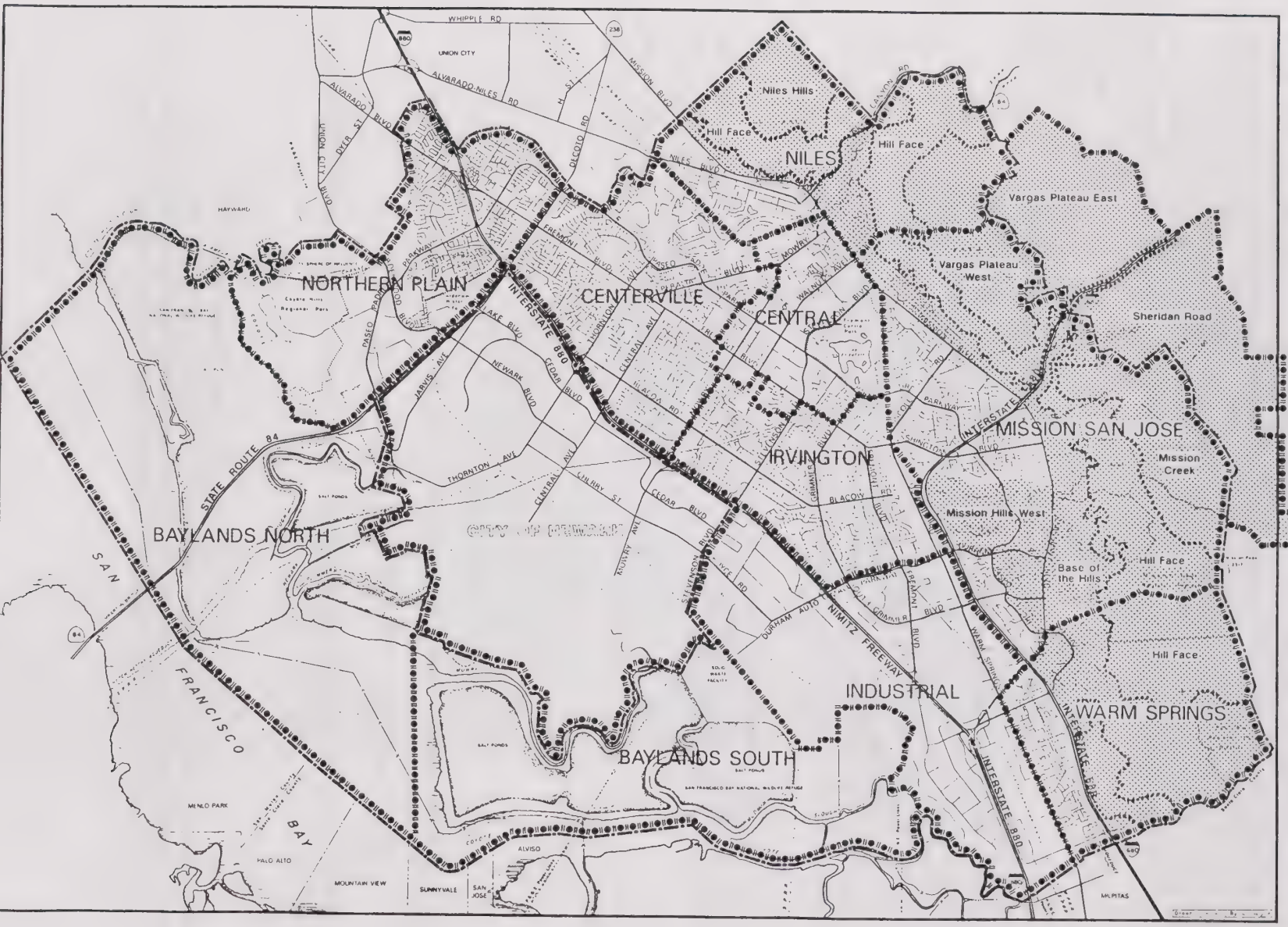
* Condominiums, apartments, attached single family homes, mobile homes
** About half the public acres are in the National Wildlife Refuge
*** Total Available Acres under 1989 General Plan; planimetered from Summary Map

Fremont's commercial and industrial sectors employ an estimated 55,870 people (1990). While Fremont has had healthy employment growth, the growth in housing has been more rapid: there are an estimated 1.74 workers living in Fremont for every job. Fremont's housing has provided workers to support the tremendous employment growth that has occurred between Silicon Valley and San Francisco. Two-thirds of Fremont residents commute from Fremont, adding to the congestion on the region's roadways despite Fremont's large supply of vacant land available for new commercial and industrial growth.

Projections

The Association of Bay Area Governments' (ABAG) projections for the City are shown in Table 3-2 through the year 2005. Over the next 15 years, the City is projected to realize its original plan for a large employment base to complement its already existing residential base. The projected 30,530 new jobs by 2005 will reduce the City's current imbalance from 1.74 to 1.25 employed residents per job.

As the City's supply of vacant land for residential use dwindles, ABAG forecasts that the rate of residential development will slow: from the 1800 units per year growth experienced in the last 20 years, to 1000 units per year between 1990 and 2000, to only 400 units per year between 2000 and 2005.



FREMONT GENERAL PLAN

PLANNING AREAS

LEGEND

- Planning Area Boundary
- Hill Planning Area with subareas

CITY OF FREMONT BOUNDARY

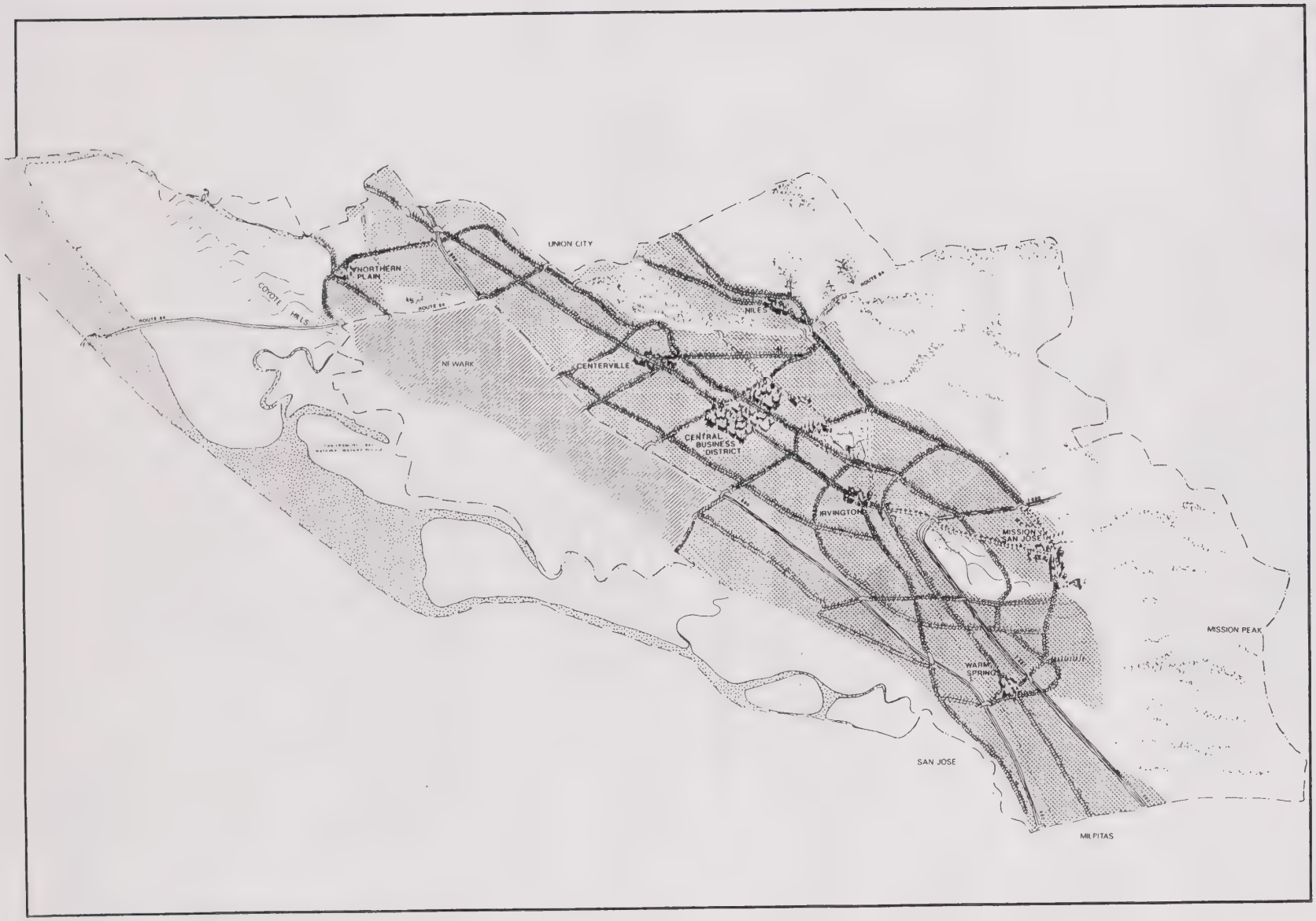
SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

0 2000 4000

NORTH

BASE MAP DATE: MAY, 1989

FIGURE 3-1



FREMONT GENERAL PLAN

URBAN STRUCTURE DIAGRAM

—·— CITY OF FREMONT BOUNDARY

NOT TO SCALE

NORTH

BASE MAP DATE: MAY, 1989

FIGURE 3-2

ABAG's projections are prepared based on ABAG's review of regional growth patterns and cities' land use plans at the time the projections were made. Cities may have more or less growth than ABAG projections. This General Plan will, in some instances, accommodate more growth than expected by ABAG; in other instances it accommodates less growth.

Table 3-3 presents the City's projections in regards to developed land uses for 2010 based on the current General Plan. The City's projections are extrapolated from ABAG's projections. However, to be conservative in infrastructure planning, the City's projections assume somewhat higher levels of employment growth than might be expected from ABAG figures (see Land Use Background Report for a discussion of the assumptions used in preparing this table). The City's residential development projections are generally consistent with ABAG's.

Table 3-2
Growth Forecasts; 1990 - 2005

(ABAG, Projections '90)

	1990	2005	Change	%Change
Population	175,200	203,600	28,400	16%
Households*	61,190	73,410	12,220	20%
Jobs	55,870	95,400	39,530	71%
Employed Residents	97,300	119,700	22,400	23%
Employed Residents/Job**	1.74	1.25	.57	

* Households are approximately the same as housing units; 2.74 persons per household are estimated in 2005.

** ABAG estimates 1.59 workers per household in 1990 and 1.63 workers per household in 2005.

Table 3-3
Land Uses, 1989 and 2010

COMMERCIAL/INDUSTRIAL

	Developed 1989	Developed 2010**	Jobs 2010	Jobs 2030
Retail/Commercial	10.2 mil. sq.ft.	15 mil. sq. ft	35,400	36,000
Industrial	25.0 mil. sq.ft.	50 mil. sq. ft.	74,700	108,000
Other Employment*			10,000	N/A
Total Employment	to be added		120,100	144,000

RESIDENTIAL

	Developed 1989	Developed 2010	Population 2010	Population 2030
Single Family Res.	42,100 units	45,400 units	124,400	N/A
Multi-family Res.	18,300 units	26,700 units	73,200	N/A
Total	60,400 units	72,100 units	197,600	260,000

* Other Employment = government, schools, construction, etc.
** Projections do not assume any changes to study areas.
*** Due to the number of variables, the year 2030 population and jobs should not be construed as growth projections, but general trends. See Land Use Background Report for discussion on long term growth.

Source: City of Fremont Community Development Department

BAYLANDS PLANNING AREA

Setting

The Baylands Planning Area includes lands which are under the Bay, salt ponds, wetlands, seasonal wetlands, and other uses associated with the Bay and wildlife habitat. The City's Solid Waste Landfill is also located in this Planning Area. The San Francisco Bay National Wildlife Refuge occupies the vast majority of this Planning Area. With the exception of the salt ponds and landfill, virtually all of this Planning Area is protected for habitat and other resource conservation uses.

Projections

No significant change in the uses in the Planning Area is expected. A solid waste facility may be located on or near the existing land fill site. The capacity of the land fill itself may be exhausted in the next 20 years (see the Public Facilities Chapter for further discussion).

Land Use Plan

The entire planning area, with the exception of the possible waste facility, is planned for open space and agricultural uses. Salt production is considered an agricultural use.

CENTERVILLE PLANNING AREA

Setting

Centerville is one of Fremont's five original historic districts. The heart of Centerville is at the intersection of Peralta and Fremont Boulevards where two historic East Bay highways met near an important railroad line. In the last twenty years the vitality of Centerville's original commercial core has been challenged by several converging factors: an aging building stock, competition from newer development along Fremont Boulevard and along Thornton Avenue (which replaced Peralta Boulevard as the main east/west arterial road in the area), and changes in the shopping and lifestyle needs of residents.

For the last several years, much of Centerville's commercial character has been shaped by Fremont's auto sales industry which has developed in Centerville. Auto sales and other auto services have been a large part of Centerville's commercial identity.

Surrounding the commercial areas of Centerville are several residential neighborhoods. While the majority of the land is devoted to single family detached homes, a proportion of the homes in Centerville are apartments and condominiums, many of which have been built in the last ten years along major boulevards such as Paseo Padre Parkway.

Similar to many of the historic districts in Fremont, Centerville has some remnant industrial uses and some newer industrial uses which are largely connected to the auto industry (repair, glasswork, machine shops, etc.).

The Centerville Planning Area includes a portion of the Alameda Creek Regional Trail, and the Alameda Creek Quarries, currently used as recharge facilities for the City's aquifer (see Water Resources section of the Natural Resources Chapter for further description).

Projections

Significant change is expected in the character of Centerville's commercial area as a result of the planned relocation of most of the auto dealerships to an auto-mall west of I-880. The move will not only lead to the vacating of 31 acres of current dealerships, but may also affect the auto services and other businesses (such as restaurants) partially dependent on the car dealerships and their employees. The loss of the auto dealers may also have a significant impact on some of the older, marginal retail areas in Centerville.

In response to the planned auto dealership move, the City of Fremont began the preparation of a specific plan for the Centerville commercial area. The plan is not yet completed but upon its adoption will become an integral part of this General Plan.

Another change expected over the next ten years is the gradual phasing out of isolated industrial uses. While some of the automobile oriented industrial uses may remain, non-auto oriented industrial uses will probably be phased out and replaced by residential or commercial uses, depending on location.

Little change is expected in the character of Centerville's existing residential neighborhoods. The issue likely to arise most frequently in existing residential neighborhoods will be conflicts between homeowners who wish to rebuild or remodel their homes, and other residents who believe the development plans to be out of character with their neighborhood.

While existing neighborhoods will remain largely as they are today, new housing and commercial uses are likely to be constructed on sites vacated by auto dealers and other commercial and industrial users. Ensuring new housing and other new uses are consistent with the scale and character of Centerville will be an important concern for the future.

A major change will occur in Centerville if a new State Route 84 is constructed in the historic alignment near Decoto Road, either as a parkway or freeway. Any type of road would have impacts on the adjacent land and on the transportation patterns in Centerville. The City has requested various alternatives be considered for State Route 84 (see Transportation Chapter for further discussion) including relocating the State route to another alignment outside of Fremont.

Finally, on the edge between Centerville and Niles is the proposed Alameda Quarries Regional Recreational Area, scheduled for development in the future. This area will add a significant new recreation resource within walking distance of many Centerville residents.

Land Use Plan

The Land Use Plan includes no significant changes in existing residential areas. However, change is permitted adjacent to existing neighborhoods, based on a Centerville Specific Plan, currently being prepared (1990). Until

the Centerville Specific Plan is adopted, all new buildings or changes in use proposed within the Centerville Study Area will be subject to discretionary review to ensure the use does not conflict with or preclude the implementation of the preliminary planning effort.

In regard to other areas in Centerville, the plan identifies some isolated industrial areas as shown on the Planning Area Land Use Diagram for evaluation for conversion to an alternative use. Other industrial areas are retained for light-industrial uses.

The Land Use plan also reflects the City's strong support for the development of the proposed Alameda Creek Quarries Regional Recreation Area.

CENTRAL PLANNING AREA

Setting

The Central Planning Area of Fremont includes three distinct sub-areas, as follows:

- **Central Business District (CBD).** Fremont's CBD is generally the area between BART on the east, Mowry on the north, Fremont Boulevard on the west (extending to Argonaut Way at the Hub,) and Stevenson Boulevard to the south. The CBD is described in more detail in the Local Economy Chapter. In summary, the CBD holds some 2.2 million square feet of office space including a growing medical complex. It also holds some 1 .4 million square feet of retail space, as much as a major regional shopping center.

- **Central Area Residential.** Residential uses surround the Central Business District on all sides. East of the BART tracks is an area of single family neighborhoods and high density residential areas. The City has focused its highest density residential land use designations around the CBD and near BART to take maximum advantage of proximity to transit and add to the vitality of the CBD. While some of the land designated for higher density housing is vacant, a significant amount of high density housing has been developed in this area. On the north and south of the CBD are other predominantly single family residential areas. The single family residential area west of the CBD is in the Irvington Planning Area.

- **Industrial Area.** An area between the railroad tracks near Alameda Creek includes several types of industrial use.

Central Park, Fremont's one City-wide park and the Civic Center area which includes the City Government Building and main library are both in the Central Planning Area.

Projections

Central Business District. It is the intent of this Plan for Fremont to have a vibrant, well defined, visually distinctive Central Business District as the focus of the City's governmental, cultural and commercial activity. The Central Business District should unite all parts of the city. The CBD is projected to add some three million square feet of office and medical space and about a half million square feet of retail space over the next 20 years. If areas are converted to mixed use (see "Land Use Plan below) some residential development may also occur in or adjacent to the CBD.

Central Area Residential. Change is not expected in the existing single family residential areas. In regards to the higher density areas, the vacant land proposed for housing is expected to be developed by the turn of the century. Until recently, higher densities were not considered economically marketable in Fremont but this is slowly changing as densities of projects in the vicinity of the BART station have increased.

Industrial Area. New major industrial development in the industrial area near Alameda Creek is not expected due to the restricted access and its proximity to single family residential areas. Any industrial uses in this area which use toxic materials would increase the potential of an accidental spill which could pollute the City's adjacent groundwater recharge facilities.

Also proposed for the Central Area are additional facilities in the Civic Center area and Central Park, including various recreation facilities and public buildings.

Land Use Plan

CBD. The CBD is intended to be a high intensity, pedestrian oriented office, medical, civic, entertainment and business nucleus. The Plan seeks to focus the highest intensity of use near the BART station. It also seeks to maintain a healthy retail center for offices and for nearby residents. To more actively promote these goals, the General Plan calls for a detailed design and development plan for the CBD. Such a plan would focus the highest intensity of use in a "core area." It is anticipated that some areas currently within the CBD around the core may be converted to high intensity residential or mixed use (commercial/residential) areas.

In the interim, until a more detailed plan is prepared, this Plan allows for a wide variety of uses and adopts policies to guide review of proposed projects within the CBD.

Central Area Residential. The land use plan for the Central Area east of the CBD reaffirms past plans which call for the highest density residential areas in Fremont east of the BART station and adjacent to the CBD. This plan also continues to discourage lower density development in areas proposed for high density.

Industrial Area. The small industrial area is retained, but most is identified as a "light industrial" due to its proximity to residential areas and the City's water supply.

Central Park. A master plan for Central Park is recommended to establish a long term conservation and development context for decisions regarding the Park.

IRVINGTON PLANNING AREA

Setting

Similar to Centerville, the historic district of Irvington developed at the crossroads of two major East Bay roads and the railroad. The "five corners" area at Fremont Boulevard, Washington Boulevard and Bay Street is the traditional center of Irvington. Irvington still retains many buildings dating from before the turn of the century. The Irvington commercial center spreads east on Washington Boulevard toward the railroad, extends in both directions on Fremont Boulevard from Washington Boulevard, and west on Grimmer Boulevard from Fremont Boulevard. The Irvington Planning Area also includes a second newer commercial center near the Mowry Avenue interchange with I-880, referred to in this Plan as the Mowry/Blacow Community Commercial Center.

The area surrounding Irvington's historic commercial core is primarily single family residential development. These include historic residential areas and pre-incorporation subdivisions dating from the 1950's, as well as newer development occurring since incorporation. There are also apartments and condominiums along major roads and around the commercial center. The Mowry/Blacow Commercial Center serves the newer neighborhoods developed since 1960 between I-880 and the CBD.

Irvington has some isolated older industrial areas along the railroads. Most of the industrial uses are smaller businesses, with several auto related businesses. The industrial area is isolated from other industrial areas and generally underutilized.

Projections

A significant change expected in Irvington in the next ten years is the development of a BART station at Washington Boulevard and Osgood Road. The history of existing BART stations shows land use changes around BART stations happen slowly over a long period of time. After the BART station is built, a gradual change in the area is likely to occur as newer commercial and higher density residential uses are developed in the vicinity of BART.

A large portion of the commercial center of Irvington is also a redevelopment area, and some street improvements have been undertaken and a design plan is underway (1990). The roadway improvement project may assist in revitalizing portions of the Irvington commercial area. However, significant efforts towards revitalization will be necessary to avoid decline of some of the older shopping areas.

The Mowry/Blacow Community Commercial Center has added uses and expanded over the years. However, competition from the regional shopping mall in Newark and lack of a focus or special character for this area may limit its future growth potential.

Little change is expected in existing residential areas. As with all older residential neighborhoods, some conflicts may arise as owners "upgrade" their residences in a manner considered unsuitable by other property owners. New higher density housing can be expected around the existing commercial core and along arterials.

Land Use Plan

The land use plan for Irvington calls for maintaining the boundaries of the Irvington Community Commercial Center in order to limit the spread of commercial uses and encourage revitalization of existing areas within the center. Design guidelines are being prepared for some of the Irvington commercial area which should be considered and adopted when completed. Additional refinement of the land use plan for Irvington is still needed to foster economic vitality and a focused, pedestrian oriented commercial center.

The land use plan for areas near the proposed Irvington BART station should also be reviewed for compatibility with the station at such time as funding for the station is committed by BART. The City should take an active role in reviewing BART station design plans to ensure compatibility with the character of the community.

MISSION SAN JOSE PLANNING AREA

Setting

The historic district of Mission San Jose includes the oldest continuously settled area in Fremont, dating back to the founding of the Mission in 1797. Many historic buildings still remain in the commercial center, located within a two block radius of the rebuilt Mission. Just south of the Mission is Ohlone College, a two-year California Community College facility.

Surrounding the commercial center is a mix of older and newer homes at various densities, with the majority being single family homes. Moving further away from the commercial area towards I-680, there is a rugged area of foothills, most of which are now developed with single family homes and condominiums. North of I-680 are neighborhoods of single family homes, some apartments and condominium projects. In the hills above Mission Boulevard are subdivisions including single family homes and, further into the hills, large custom homes. There is only one small industrial site in the Planning Area.

Projections

The Mission San Jose Planning Area has a smaller commercial center with a smaller range of available goods and services than most other Community Commercial Centers in the City. There has been relatively little new development in the commercial center. However, the innate attractiveness of the location combined with the access to Ohlone College and to I-680 may make Mission San Jose commercial area a very attractive development location in the next ten years. Design and development guidelines will need to be in place if the City wishes to preserve the scale and character of the commercial area while allowing for new vitality and development.

In addition to new commercial development, this Planning Area has the vast majority of what remains of the land in Fremont planned for single family housing. Much of the vacant land faces significant development constraints due to hillside locations. Despite constraints, it is expected that this area will be virtually built out in the next five years.

A major golf course is planned on publicly owned land at the east end of Stanford Avenue.

Land Use Plan

The land use plan for Mission San Jose makes no significant changes in the area. Similar to other historic Community Commercial Centers (CCC), a more detailed design and development plan is proposed for the Mission San Jose CCC. In the interim, it will be important for the City to continue to review development proposals for their consistency with the area's historic character.

NILES PLANNING AREA

Setting

The historic district of Niles has a rich history, beginning as an agricultural and horticultural center for the Bay Area as well as a railroad hub where one leg of the intercontinental railroad was completed with a gold stake in 1869. It had a brief stint as a movie-making center and home to Charlie Chaplin. Today this history can still be found in the historic store-fronts on Niles Boulevard, many of which are devoted to antique sales.

The residential areas in Niles range from the historic homes adjacent to the commercial center, to the newer neighborhoods at the base of the hills along Mission Boulevard.

The Niles area is somewhat isolated from the rest of Fremont, with Alameda Creek on one side, the quarries on another, and the hills on the third. There are only two ways to get into Niles from the rest of Fremont, either from Mission Boulevard or from Niles Boulevard.

There are several industrial sites in Niles, including an older tile-making plant, a chemical plant and other small industries.

Projections

Historic commercial Niles faces an uncertain future. Significant investment will be required in the next ten years to maintain and upgrade the existing historic buildings. Such investment may be required to bring these buildings into conformance with State requirements for earthquake safety. Some existing businesses in Niles may not be able to afford the increased costs associated with significant rehabilitation. At the same time, as commercial and residential land supplies dwindle elsewhere in the City, some underutilized areas in Niles will be targeted for new development. There is a growing interest in the historical character of Niles and it is likely to increasingly become a destination for tourism and shopping. Its reputation will be further enhanced by expected restoration of some historic resources such as the Vallejo Mill and historic railway, and the completion of a regional trail through Niles Canyon. Effort will be needed in the next ten years to retain the charm and history of Niles while managing the changes that are likely to occur in this area.

Little change is expected in the residential areas, with the exception of some development in previously passed-over parcels. Conversion of older, isolated industrial sites to other uses is also likely to occur. Finally, the widening of Mission Boulevard to six lanes, development of State Route 84 in its historic alignment north of Niles, and projected development in the Union City area may all have significant impacts on the character of Niles and access to it.

Land Use Plan

The Niles Planning Area Land Use Diagram shows little change for Niles. As with each historic Community Commercial Center, this Plan calls for a more detailed design and development study for Niles to better manage and guide future development. Some mixed use may be appropriate on the edges of Niles or on the commercial site on the east side of Niles Boulevard. Most existing industrial sites have been identified as future residential or commercial areas, recognizing continued industrial uses of these areas will not be appropriate adjacent to the residential uses.

A freeway or major arterial has been proposed between Mission Boulevard and I-880. The construction of State Route 84 would have a significant impact in regards to access to Niles and could affect the types and locations of land uses located near interchanges with the proposed road (e.g., Mission Boulevard). The City has requested various alternative roadway types and alignments be considered for State Route 84.

NORTHERN PLAIN PLANNING AREA

Setting

This area contains several distinct sub-areas created by major physical barriers which separate the various parts of the planning area:

- **Ardenwood New Town.** This area, located west of I-880 and south of Alameda Creek, was developed after 1977. The land had been part of a large single land-holding known as the Patterson Ranch. The Ardenwood area was originally planned as a "New Town" within Fremont: a separate "mini-city" with an integrated mixture of industrial, commercial and residential areas. The residential areas have been built as planned, including a network of park facilities. However, the major commercial center has not yet been developed and the industrial area (discussed below) is still largely vacant. Ardenwood is bordered on the south by the Ardenwood Regional Preserve, a park owned by the City of Fremont and managed by the East Bay Regional Park District as a working historic farm. On the north is the Alameda Creek Channel, on the East is I-880 and on the west is the Ardenwood industrial park.

- **Northgate (Old Alviso School) Neighborhood.** Alviso School (established 1856) was once the focal point of this neighborhood. The school site, adjacent to Northgate Community Park, has since been developed with housing.

  This area is now a continuation of the single family residential areas and neighborhood-serving shopping areas continuing south into Centerville. On the east this area is separated from the Niles

Planning Area by the Alameda Creek flood control channel, and on the west I-880 separates this area from Ardenwood.

- **Ardenwood Industrial Parks.** The industrial area of Ardenwood was planned to provide jobs for the residents of Ardenwood and capitalize on the expected overflow of high-tech industries seeking new space across the Dumbarton Bridge from Silicon Valley. Although in existence for several years, less than 25 percent of the industrial area is currently developed.

- **North Fremont.** North of Alameda Creek, west of I-880 and largely surrounded on the other sides by Union City, is a small residential neighborhood of single family homes.

- **Open Space.** A portion of the original Patterson farm which is still intensively cropped, and a portion of the Coyote Hills Regional Park are also in this Planning Area.

Projections

Ardenwood New Town. The remaining vacant residential land in Ardenwood, will be built-out in the next three to five years. No additional residential development in this area is expected. A future community commercial development is expected to provide a focus and identity for the Ardenwood residential area. Additional park and school development is also expected in the next ten years.

Northgate. Little change in land use is expected in this area.

Ardenwood Industrial Parks. The industrial area is expected to build-out over the next twenty years. The area's location and accessibility continue to make it a prime site for expansion of Silicon Valley firms.

Open Space. Significant change in existing open space uses (including agricultural lands) are not expected in the near term, although a range of possible uses are possible in the long term. Portions of the western edge of the Planning Area have been targeted by the National Wildlife Refuge for purchase. The areas identified for possible acquisition include open space and agricultural uses as well as one parcel planned for industrial use.

The City will consider a General Plan Amendment for the area of the Northern Plain northerly of Paseo Padre Parkway, between Route 84 and the Santa Fe Pacific Railroad tracks designated Open Space to other designations to allow other uses at such time as the area known as Ardenwood Forest New Town is substantially developed, the need and appropriateness of the uses can be demonstrated, and the finding made that the environmental impacts are insignificant (or overriding considerations finding is made) and the finding made the infrastructure is adequate to handle the additional uses.

Land Use Plan

The General Plan continues the direction established by the City's previous planning for the Northern Plain area, as described below.

- **Ardenwood.** A Community Commercial Center site continues to be designated in this General Plan. This commercial area is meant to be pedestrian-oriented and include a mixture of local-serving offices, retail uses and, if appropriate, public uses such as a library or community service center.

- **Industrial Area.** The Plan continues to designate an area for a high-technology industrial and business park. The plan would also permit some tourist-commercial uses in the industrial area adjacent to State Route 84 interchanges.

- **Open Space.** The Plan retains open space uses. However, a study is proposed for the future possible urban development of the area now designated open space. The private open space area presently has an open space easement for agricultural purposes. The study will analyze other open space areas (such as an active sports area) which may displace part of the agricultural use.

WARM SPRINGS PLANNING AREA

Setting

Warm Springs is one of the original five districts of Fremont, but virtually none of the small historic commercial area of Warm Springs remains. The commercial center of Warm Springs is now the shopping center complex and other commercial buildings at the intersection of Mission and Warm Springs Boulevard. Remnants of Warm Springs historic past remain in the "Hidden Valley" area off Stanford Avenue where the original springs still flow.

A significant portion of the Warm Springs residential area is immediately adjacent to a major industrial area across Warm Springs Boulevard, extending south from Mission Boulevard. Some of the residential neighborhoods in this area date back to the 1950's, while newer homes and large custom homes have been built in the hills east of Mission Boulevard and I-680. Some condominium and apartment development has occurred near the commercial center.

Projections

The most significant changes likely to affect the Warm Springs Planning Area may occur immediately adjacent to it. These include the development of a proposed BART station at South Grimmer and Warm Springs Boulevards, and the changes likely to occur in land use near the station. Some of those changes are already under consideration as part of a Warm Springs BART Area Specific Plan study. Another change which may have a significant affect on Warm Springs would be the development of a fourth Fremont BART Station near Kato Road and Warm Springs Boulevard. This last station is only a proposal at this time.

The Warm Springs Community Commercial Center has been healthy, and additions to it can be expected to be proposed over the next few years. Finally, some limited amount of residential development is expected in the hills above I-680.

Land Use Plan

Because both of the proposed BART stations are outside the Warm Springs Planning Area, they are discussed in the Industrial Planning Area section. However, significant residential development near the Warm Springs station could have impacts on the demand for commercial and other neighborhood services. These will be assessed during the specific planning process.

Additional significant changes are not proposed in the Warm Springs Planning Area Land Use diagram from those uses planned in the past.

INDUSTRIAL PLANNING AREA

Setting

The City's Industrial Planning Area is over four thousand acres extending west from Warm Springs Boulevard to I-880 and west to the Bay Lands planning area. In 1990, the area is separated from residential uses which are generally incompatible with the noise, odors, truck traffic and other impacts of industrial uses.

The history of the development of this area is described in the Local Economy Chapter. In summary, industrial development in Fremont has followed the rest of the region's economy. While Fremont was able to attract a major auto manufacturing facility in the 1960's, it did so when the region was turning away from traditional manufacturing facilities. More recently, Fremont's industrial area has attracted a significant amount of warehousing and high-technology industries due to its central location in the region.

About 45 percent of Fremont's total industrial land supply is developed.

Projections

As is discussed in more detail in the Local Economy Chapter, development in the City's Industrial Area is dependent on the health of the Bay Area's economy. Fremont has a significant land resource available for new industrial development. The City is poised to take advantage of whatever new industrial or semi-industrial uses develop in the next twenty years. Fremont is committed to the long term viability of its industrial uses. Intrusions of incompatible uses which would restrict present and future industrial uses should be avoided. Its role as a center for warehousing and distribution for the rest of the region is also likely to grow due to the availability of land and Fremont's central location. The City's land use plan expects approximately two-thirds of the currently available industrial land to develop in the next twenty years with a variety of high technology, manufacturing, warehousing and wholesaling uses.

Some designated industrial land on the west side of the Industrial Planning Area has been identified for possible incorporation into the National Wildlife Refuge (see Parks and Open Space Chapter for further discussion).

Two areas in the Industrial Planning Area have been designated study areas to evaluate whether it is appropriate to convert them to alternative uses. Each is described below under the Land Use Plan discussion. If approved for conversion, residential uses would be expected to build-out rapidly.

Land Use Plan

The land use plan conserves the majority of designated industrial land for future industrial development. The Plan seeks to differentiate between different types of industrial uses to allow for separation of conflicting activities and to better serve the needs of different types of industry. It encourages the development of "park" environments for those users who prefer this type of environment, and protects them from those industries less concerned with amenities. It also establishes a category of small local-serving industrial uses ("light industry") for industrial uses near residential and commercial areas.

As noted above, two large areas are designated for study for possible conversion to alternative uses:

- **Warm Springs BART Study Area.** To make optimal use of the access provided by a future BART Station, the City is designating this area for consideration of alternative land uses. Conversion to residential use is one of the options under consideration.

- **Fremont Shores Study Area.** A study is proposed to evaluate the possible conversion of some land previously planned for industrial use to residential and other uses. This area is referred to as the Fremont Shores Study area. Due to its location, the conversion, if approved, would establish a new residential neighborhood in Fremont, and would require necessary neighborhood services such as schools, parks, and stores.

While no site is currently identified, additional industrial land could be converted to a "High Volume Commercial" area which meets the criteria identified in this General Plan. However, outside of such designated areas, the plan would limit the growth of commercial uses to those that serve industry.

HILL PLANNING AREA

The City's eastern hills rise above Mission Boulevard and I-680 to form an open space backdrop to the City (see separate Hill Planning Area map for location). The City's hills extend eastward to the City limits. Beyond the City's boundary there is a significant amount of hill land in private ownership. Development in this area would have a significant impact on the City. Similarly, any development plans for the area within the City's boundaries would have an impact on the adjacent lands. Due to this relationship, the City considers this area to be part of an Expanded Planning Area and, for planning purposes, has shown it as part of the Hill Planning Area, as shown on the separate Hill Planning Area map. While no decision has been made, there is some potential for part or all of the expanded planning area to be incorporated into the City.

The voters of Fremont considered the eastern hills to be important to the character of the City and adopted an initiative in 1981 to provide special protection for them. The initiative included a General Plan amendment. No substantive changes to the amendment can be made without another vote. However, additional policies can be adopted to supplement the initiative-adopted amendments so long as they are consistent with the amendment. Accordingly, the initiative-adopted General Plan amendment is presented in its entirety in the Goals, Objectives and Policies section of this Chapter, as required by the initiative.

The following descriptive section was not adopted by initiative and summarizes existing conditions, projections and the intent of General Plan policies in regards to the Hill Planning Area. The following information does not supersede the specific definitions and policies regarding the "Hill Area" adopted by initiative and found in the Goals, Objectives and Policies section of this Plan.

Setting

The Hill Planning Area is east of Route 680 and Mission Boulevard, from Milpitas to the Union City limit. It includes Niles Canyon, Mission Pass and the Mission Hills but excludes a small area at the mouth of Niles Canyon and at the base of Mission Pass. It includes land outside of the City's boundaries to the edge of the publicly owned watershed lands owned by the San Francisco Water Department. The area can be divided into seven distinct units as shown in the separate Hill Planning Area map and described below.

Base of the Hills. This area is the area below the toe of the hill. The area is between Mission Boulevard (and I-680) and a line which demarks the beginning of the steeper hills. The demarkation line is called the "Toe of the Hill" and is defined as a line along the base of the hills along which the natural grade is a maximum of 20 percent. The Base of the hills is the most easily developed portions of the Hill Planning Area and most of this area is developed. The provisions of the Hill Initiative do not regulate this area.

The Hill Face. This area is perhaps the dominant element of the City's visual and physical character. The Hill Face extends from the "Toe of the Hill" to the "Ridgeline". The Ridgeline is defined as the visual ridge as seen from Mission Boulevard, I-680 and other locations (see "Definitions" section of the Hill Planning Area policies section). The Ridgeline is shown on a separate Hill Planning Area map. Development of the Hill Face would significantly affect Fremont's character. The Hill Face is also a relatively constrained area for development, with special geologic constraints and unique biological resources. At this time (1990) there are only a few houses located on the Hill Face.

Niles Hills. This is a wedge of land east of the hillface and north of Niles Canyon extending to the Union City limits. This area is a mix of steep terrain and some rolling hills and is undeveloped.

Mission Hills West. This area is bounded by Mission Boulevard, the south branch of Mission Creek, Freeway Route 680, Durham Road and Paseo Padre Parkway. The principal topographic features of the area are three ridges formed by the erosive action of streams. The area is largely developed with a mixture of low density semi-custom homes, clustered residential development, the undeveloped Antelope Hills trail park, and dedicated open space.

Vargas Plateau West. This area extends easterly from the visible ridgeline to the City's eastern City limits, and extends north from I-680 to the steeply sloped land dropping off to Niles Canyon. The Vargas Plateau includes areas of rolling hills and relatively flat terrain as well as highly constrained, steep slopes and biologically sensitive creek areas. This area has approximately 25 homes.

Vargas Plateau East. This area is physically part of the Vargas Plateau but outside of the City's existing boundaries. This subarea extends east from the City's boundaries to land owned by the San Francisco Water Department.

While physically part of the Plateau, the Vargas Plateau East area straddles two watersheds. The approximate location of the watershed boundary is shown on the separate Hill Planning Area map. On the east side of the watershed boundary, water drains into the Sunol Valley and becomes part of the San Francisco Water Department's Alameda Creek water supply (part of which is used by the City of Fremont). On the west side of the watershed boundary, water drains into the City, mostly into Mission Creek and other creeks which do not affect Alameda Creek or the City's water supply.

Mission Creek. The area east of the visible ridge and south of I-680 is referred to as the Mission Creek area. The Mission Creek area is considerably more rugged than the Vargas Plateau; much of this area includes slopes similar to the Hill Face. This area has only a few homes.

Sheridan Road. South of I-680 is another area extending southwest from the Sunol Valley. Some of this area is an extension of the Valley with relatively flat land and rolling hills, while other areas are steeply sloped similar to portions of the Mission Creek area. Existing uses include nurseries and quarries, in addition to agriculture.

In addition to these areas, the Hill Planning Area also includes Mission Pass and Niles Canyon, two routes through the hills which extend from Sunol Valley into Fremont.

The few roads serving the hills above the Toe of the Hill are mostly narrow. Only a small portion of the lower portions of the Hill Face are served with public sewer and water, and there is no sewer or water services at higher elevations or east of the Ridgeline. Almost all of the Hill Planning Area above the Toe of the Hill is outside of the area where the City can meet its objective of responding to emergencies within five minutes.

Projections

Development in most of the Hill Planning Area within the City's boundaries is controlled by the Hill Area Initiative. Development outside of the City's boundaries is under the County's jurisdiction unless and until an area is incorporated into the City. The Hill Area Initiative would not apply to any area incorporated into the City unless the City chooses to apply it.

The initiative establishes a development reserve overlay (DRO) which permits only very low density residential development (one unit per 20 acres) unless gravity-served public water and sewer are available, and police, fire services and roads meeting City standards are available.

When services are available, development is permitted at a range of densities depending on location, degree of constraint, and land use designation on the General Plan previous to the initiative. Each subarea is discussed below (including those outside of the City).

Base of the Hills. This area below the Toe of the Hills generally has City services and is largely built-out. The remaining vacant developable parcels are expected to be developed with lower density single family homes in the next five to ten years.

Hill Face. If services are made available, the Initiative permits very low density development (one unit from five to twenty acres) in this area, depending on the degree of constraint. Only very limited development is expected on the Hill Face. Increased development on the upper Hill Face and ridgeline may occur if additional access roads and services are made available from the Vargas Plateau (see below).

Niles Hills. If services are made available, a portion of this area east of the ridge is designated for low density (.5 to 1.5 units per acre) development. The remainder is limited to one unit per five to ten acres. A Specific Plan being prepared for the adjacent Union City hills may eventually lead to making urban services available to this area thereby allowing for the removal of the DRO restrictions.

Mission Hills West. Some additional low density residential development is expected on property along Sabercat Road above Durham Road and on scattered sites along Durham Road and Mission Boulevard. A small area of office and neighborhood commercial development at Sabercat Road and Pine Street is also permitted.

Vargas Plateau West. A portion of this area is designated for low density residential development (.5 to 1.5 units per acre) If services are available, several hundred to over a thousand residential units could be built. In addition to homes, this level of development would also require the provision of schools, parks and some retail uses. Without urban services, less than a hundred units would be expected in this area. Whether or not to provide services is therefore the key decision in determining the future of this area. The remainder of the area is permitted to develop at very low densities if services are available (one unit per five to ten acres, depending on degree of constraint).

Vargas Plateau East. This area is not within the City limits. Under the County, this area is planned for agricultural use and only very low density development (1 unit per 100 acres) is allowed. There have been proposals to further reduce the density of allowed development. Other scattered uses have been permitted consistent with agriculture use, including a quarry.

If incorporated into Fremont, the area would be subject to Fremont's land use plans. It is anticipated that, similar to the contiguous land within the City, only very low densities (maximum of one unit per 20 acres) would be permitted unless services were made available. If services were available, a variety of uses are possible.

Before any decision can be made regarding expansion of the City boundaries, many issues must be evaluated, including access, provision of services and water quality impacts of development in this area. Especially important to the City is the impact of any possible development on the watershed of the

San Francisco Water Department which ultimately supplies a portion of the City's drinking water.

Mission Creek. Most of this area faces severe geologic and access constraints. If services could be provided, development potential would be permitted from one unit per five to ten acres depending on degree of constraint. Due to the constraints on this area, very little development is expected.

Sheridan Road. This area has significant development potential due to its proximity to the freeway and supply of relatively flat land. Extension of services to the Vargas Plateau, could also increase pressure to extend services and permit increased development in portions of this area. Accordingly, the General Plan recommends that the future of this area be considered in the planning studies for the Vargas Plateau.

Land Use Plan

The land use plan for most of the Hill Planning Area is prescribed by the initiative. For those areas outside of the City, this plan calls for consideration of their long term future in planning studies. Another study will better delineate the exact location of the Toe of the Hill and Ridgeline in the Warm Springs Planning Area above I-680. The need for and location of a school site on the eastern side of I-680 also requires further review.

The General Plan calls for the following land uses in each of the Hill Planning Area sub-areas.

Base of Hills. The plan would retain existing designations for this area which permit low density residential development consistent with environmental resources and constraints.

Hill Face. A key element of the plan is preservation of the visible Hill Face and Ridgeline from development. Several strategies are recommended for achieving these objectives, including no visible protrusion into the ridgeline.

Niles Hills. This plan retains existing policies for this area which would permit some low density residential development if services are made available. The City will need to monitor the Union City planning process in regards to this area.

Mission Hills West. The General Plan shows no land use changes for this subarea.

Vargas Plateau West. This General Plan takes no position on the advisability of providing services to the Vargas Plateau. The Plan recommends a two step planning study process to arrive at a decision regarding the area's future, as discussed in the Goals, Objectives and Policy section of this Chapter.

Vargas Plateau East. Because provision of services to Vargas Plateau West would increase pressure to incorporate the remainder of the Plateau into the City, the General Plan includes this area in the planning studies which will consider the future of this area as a whole.

Mission Creek. The plan makes no changes in past policy for this area.

Sheridan Road. Because provision of services to the Vargas Plateau would also make services more readily available to this sub-area, the General Plan calls for the proposed planning studies for the Vargas Plateau to consider the future of this area as well.

Goals, Policies and Implementation

Fundamental Goals

Virtually all of the City's **Fundamental Goals** are relevant to land use, but the following are perhaps most relevant:

F 2 AN HARMONIOUS BLEND OF THE NATURAL AND BUILT ENVIRONMENTS

F 3 A CITYSCAPE WITH AN OPEN FEELING

F 5 A VIBRANT, WELL DEFINED, VISUALLY DISTINCTIVE CENTRAL BUSINESS DISTRICT AS THE FOCUS OF THE CITY'S GOVERNMENTAL, CULTURAL AND COMMERCIAL ACTIVITY

F 6 A UNIFIED CITY WITH THRIVING DISTRICTS AND EMERGING COMMUNITIES, EACH WITH ITS OWN IDENTITY

F 7 AN OPEN SPACE FRAME THAT INCLUDES THE HILLFACE, BAY WETLANDS AND GATEWAYS

F 8 A DIVERSITY OF RESIDENTIAL, RECREATIONAL, CULTURAL, EMPLOYMENT AND SHOPPING OPPORTUNITIES

F 9 A LARGE, DIVERSIFIED INDUSTRIAL AND COMMERCIAL BASE TO MEET THE EMPLOYMENT NEEDS OF THE CITY'S PRESENT AND FUTURE WORKFORCE

F 12 PARKS, RECREATIONAL FACILITIES AND OPPORTUNITIES

F 13 VITAL CONNECTIONS BETWEEN THE HISTORY AND HERITAGE OF THE COMMUNITY AND EVERYDAY LIFE

The following subsections are divided into broad land use designations: residential, commercial, industrial, open space and public uses. Each section discusses **land use goals** related to the designation, followed by plan policies and design and development policies. Unlike other chapters of this plan, there are no objectives in the Land Use Chapter.

Land Use Diagrams

The City's land use policies are reflected in the City's land use diagrams. The Summary Land Use diagram shows the City as a whole and illustrates land use relationships. However, due to the size of the City, the summary diagram aggregates some land use categories. More specific and detailed information on land uses is shown on the Planning Area diagrams which should be used for determining General Plan designations for any particular parcel.

Residential Development

Several of the City's Fundamental Goals relate to residential development. In summary, these goals state the importance of a diverse community, and of blending the natural and built environment. Of the four goals in the Housing Chapter, three are most relevant to land use, as follows:

GOAL H 1: **Conservation and enhancement of existing residential neighborhoods**

GOAL H 2: **High quality and well-designed new housing of all types throughout the city**

GOAL H 3: **Housing affordable and appropriate for a variety of Fremont households at all economic levels throughout the city**

Taken together, these goals lead to one primary land use goal:

LAND USE (LU) GOAL 1:
New housing development while conserving the character of the City's existing single family residential neighborhoods

Residential Land Use Policies

Allowed Uses and Densities

Policy LU 1.1: The following list of allowed uses in areas designated for residential use is descriptive rather than fully inclusive. Other uses may be allowed which achieve the intent of the plan as described in the goals and objectives and in the design and development policies.

Residential. Residential use are the primary allowed use in a residentially designated area. The type of residential use depends on the permitted density and other criteria to protect neighborhood character and the safety and welfare of residents.

Schools, Childcare Centers, Public and Semi-Public Facilities (e.g., churches) and Nursing Care facilities. These uses may be allowed, although conditions may be established to limit the impacts of these uses on residents.

Policy LU 1.2: Residential density ranges are presented in Table 3-4. For conventional development, the maximum permitted density shall be Step 1.

Policy LU 1.3: A density increase above Step 1 to Step 2 may be conditionally allowed at the discretion of the City Council to projects providing special amenities. To ensure appropriate site design and development standards, increased densities above Step 1 shall only be granted to a project approved as a Planned District development. Amenities which would permit a project to have up to a Step 2 density can include but are not limited to such features as special landscaping, recreational amenities, permanent protection of environmentally sensitive areas, provision of transit amenities, or other features beyond those required for Step 1.

Implementation 1: Requirements for a project above Step 1 to Step 2 density shall be established in the zoning ordinance.

Policy LU 1.4: An increased density above Step 2 to a maximum density of Step 3 may be conditionally allowed at the discretion of the City Council to a project which provides extraordinary benefits to the City. To ensure appropriate site design and development standards, increased densities above Step 1 shall only be granted to a project approved as a Planned District development. Extraordinary benefits to the City can include but are not limited to: significantly increased affordability of units; significantly greater preservation and/or enhancement of environmentally sensitive land or historically significant sites than normally required for Step 2. Step 3 can also be granted to projects which include off-site preservation of

environmentally sensitive land or historically significant sites.

Implementation 1: The Planning Commission and City Council shall review projects proposed above Step 2 for the provision of extraordinary benefits to the City consistent with the above policy.

Policy LU 1.5: Residential Density Range 14 shall only be considered for land within walking distance (about one half mile) of a BART Station or other major transit facility. Residential density Range 15 may only be considered for land within walking distance (about one-half mile) of the Fremont BART Station in the Central Planning Area.

Table 3-4
Residential Density Ranges

	Density Range	Residential Intensity Dwelling Units/Acre**			Persons/ Acre***
		Step 1	Step 2	Step 3	
Very Low*	1	.25	.67	1.0	1.8
	2	.5	1.0	1.5	2.7
	3	1.0	1.5	2.3	4.1
Low	4	2.0	2.8	3.5	7.7
	5	3.0	4.0	5.0	11.0
	6	4.0	5.0	6.0	13.7
	7	5.0	6.0	7.0	16.4
Medium	8	6.5	8.3	10.0	22.7
	9	11.0	13.0	15.0	35.6
	10	15.0	16.5	18.0	45.2
	11	18.0	20.5	23.0	56.2
High	12	23.0	25	27	68.5
	13	27	31	35	84.9
	14	35	42.5	50	116.5
Very High	15	50	60	70	164.4

* The characterization of density as very low, low, medium, high and very high are used to simplify the presentation of information on the Land Use diagrams. The permitted density ranges are those indicated and are shown on Planning Area maps.

** Density per gross acre

*** Based on estimated average household size of 2.74 people in 2005 (ABAG) and development at an average density of Step 2 for each density range. This is not a standard or limit on the number of people who can occupy any given unit or area of the City, but is presented for planning purposes. These persons/acre numbers are the standard used to calculate need for certain facilities (i.e., parks) for geographical areas and to calculate demand (i.e., traffic) and to provide a basis for infrastructure planning.

Density Bonus for Low and Moderate Income Housing and Senior Housing

Policy LU 1.6: To increase the supply of housing affordable to low and very low income households, an increase in density (a "density bonus") of a maximum of 25 percent above the maximum permitted density

of Step 1, and an additional incentive shall be given to a housing development in which at least:

a) 20% of the units are reserved for low and very low income households; or
b) 10% of the units are reserved for very low income households; or
c) 50% of the units are for senior citizens.

Policy LU 1.7: To encourage the development of housing affordable to low and very low income households, the Council may, at its discretion, allow a density bonus of a maximum of 25 percent above Step 2 for a Planned District residential development in which at least:

a) 20% of the units are reserved for low income households; or
b) 10% of the units are reserved for very low income households; or
c) 50% of the units are for senior citizens.

Policy LU 1.8: Housing provided in exchange for a density bonus must continue to be available to the targeted tenants for at least thirty years desirable (definition of low and very low income households are discussed in the Housing Chapter). To ensure appropriate site design, projects receiving density bonuses shall be processed as Planned District developments.

Implementation 1: When a density bonus is sought, the City shall enter into binding agreements as indicated in the policy.

Minimum Permitted Residential Density

Policy LU 1.9: To achieve a variety of housing types, the City has designated locations where moderate and higher density development is appropriate. Criteria for the location of higher density housing include access to transit, proximity to commercial areas, proximity to a collector or arterial street, and as a transition use where maximum flexibility in site design is required. For those areas where higher densities are indicated on the General Plan Diagram, construction of housing at significantly lower densities than planned would not meet the City's goals. The City therefore establishes a minimum required density of development for all

medium and high density residential uses, as follows:

- When the residential range is between eleven (11) units per acre and 35 units per acre (ranges 9 - 13), development must be within 80% of the Step 1 density.

- For areas designated 35 units per acre or more (ranges 14 and 15), development must be 95% of Step 1 density.

- For projects including 20% or more units affordable to very low and low income households, development in range 13 may occur below 80% of Step 1, and development in ranges 14 and 15 may occur below 95% of Step 1.

Minor deviations not exceeding 5 percent may be permitted by the Community Development Director in order to achieve superior design.

Policy LU 1.10: To provide for increased flexibility in the use of the existing and future housing stock and increase the availability of affordable housing, a secondary housing unit may be permitted to be added to an existing or with a new single family home in a residentially designated area. A secondary unit is a self contained living unit, either attached to or detached from, and in addition to, the primary residential unit on a single lot. To protect the character, health, safety and welfare of a neighborhood, such units will be permitted only if certain conditions are met. Those conditions include but are not limited to owner occupancy of one unit.

Implementation 1: The zoning ordinance shall establish appropriate conditions for permitting secondary units in existing single family neighborhoods and in new single family planned districts.

Residential Design and Development Policies

Policy LU 1.11: Appropriate transitions shall be encouraged between higher density residential areas and lower density areas, and between commercial areas and lower density residential areas. Transitions can be composed of streets, setbacks, open space, landscape and site treatments, building design and/or other techniques.

Implementation 1: Specific plans and other types of design or development plans shall include guidelines for appropriate transitions between uses. Where such plans or specific guidelines do not exist, the City's project review process for multi-family, commercial and industrial projects shall review projects for the provision of appropriate transitions, where necessary.

Implementation 2: Site design in residential projects shall be used to separate habitable areas of the project from noise or light sources. For instance, parking spaces, landscaping and roadways could be located adjacent to a commercial use to help buffer noise and light intrusion.

Policy LU 1.12: To the maximum extent feasible, play areas and open spaces shall be located to avoid conflict between residents attempting to reach these facilities and vehicular traffic.

Policy LU 1.13: Buildings shall be designed to provide for maximum feasible visual and auditory privacy for each unit through the use of site design, open space, landscaping and appropriate building materials.

Policy LU 1.14: Streets shall be located to provide for visual and, when appropriate, physical access to any natural water course, varied terrain, unusual or unique natural features or historical site in the project, consistent with preservation of biological and natural resources.

Policy LU 1.15: Projects shall be designed and oriented to encourage the use of attractive vistas, and the opportunities for the orientation of buildings and open space facilities to the sun.

Policy LU 1.16: Street systems, walkways and soundwalls shall be designed, when feasible, to permit convenient access to public transit and to encourage the provision of public transit to the residents of the subdivision. Bus stops shall be included in the development of improvement plans, where applicable.

Policy LU 1.17: Where open space has been considered as an element in the design of a residential development project, further development or encroachment on the open space by new buildings

shall be strongly discouraged. Where feasible, project open space shall be permanently restricted to open space through deed restriction or other appropriate means.

Implementation 1: Appropriate means for permanently protecting open space shall be defined and set forth in City ordinance.

Single Family Homes

Policy LU 1.18: Single family detached homes shall be proportional to their lots.

Policy LU 1.19: For single family residential developments, the City shall encourage within each project varied setbacks, curves in roadways, variety in frontages, and appropriate landscape treatment to create a visually attractive street frontage.

Mixed Use Development

Mixed use development allows for a mixture of residential and commercial uses on one lot and within a single development project. The mixture can be separate commercial and residential buildings on the same parcel of land, or it can be mixed use with compatible commercial and residential uses.

Policy LU 1.20: Mixed use (residential/commercial) is allowed in or adjacent to Community Commercial Centers and the Central Business District where nearby residential uses will increase the vitality and activity within the commercial district. The building intensity standards for the CCC and/or CBD districts shall be applied to mixed use projects.

Implementation 1: Sites for mixed use can be identified as part of the community commercial center and Central Business District planning processes proposed in this General Plan. Mixed use projects shall be undertaken as Planned District developments.

Rental Housing: Adaptable for the Disabled

Policy LU 1.21: All rental housing of four or more units, including housing developed as condominiums but planned for rental, shall incorporate features to make the

housing adaptable to the needs of the physically disabled.

Multi-Family Housing

Policy LU 1.22: Multifamily housing units shall be developed with consideration given to the relationship to adjacent development. Particular attention should be given to the style of roofs, with flat roofs discouraged except where they are usable outdoor space.

Policy LU 1.23: A variety of unit types and sizes shall be encouraged within each multi-family project.

Policy LU 1.24: Multi-family housing (with the exception of housing designed exclusively for seniors) shall be designed to accommodate the needs of families and children.

Implementation 1: Assess the need for a development policy encouraging or requiring multi-family housing developments to include a percentage of units with three or more bedrooms.

Implementation 2: Modify the zoning code to anticipate the need for appropriate amenities for children in the design of outdoor areas in multi-family housing.

Policy LU 1.25: Where several multi-family projects are on adjacent parcels of land, a variety of architectural and site design treatments shall be encouraged. However, an architectural or landscape design theme for several parcels may be appropriate.

Residential Development in Fremont's Hills

Due to the unique environmental characteristics and visual prominence of the hills, development policies for this area are presented separately in the "Hill Planning Area" section.

Mission Hills West

Due to the constraints associated with development in the hills between I-680 and Mission Boulevard, many of the residential design and development policies in the Hill Area Design and Development policies also apply to this area (as shown on the separate Hill Planning Area map). See the Hill Planning Area section policies.

Commercial Development

The City's Fundamental Goals and the Goals found in the Local Economy Chapter of this General Plan both provide guidance for the development of a commercial land use strategy. The following Fundamental Goals are important.

F 5 **A VIBRANT, WELL DEFINED, VISUALLY DISTINCTIVE CENTRAL BUSINESS DISTRICT AS THE FOCUS OF THE CITY'S GOVERNMENTAL, CULTURAL AND COMMERCIAL ACTIVITY**

F 6 **A UNIFIED CITY WITH THRIVING DISTRICTS AND EMERGING COMMUNITIES, EACH WITH ITS OWN IDENTITY**

F 8 **A DIVERSITY OF RESIDENTIAL, RECREATIONAL, CULTURAL, EMPLOYMENT AND SHOPPING OPPORTUNITIES**

In the Local Economy Chapter, the following goal is most relevant to land use:

GOAL LE 3: **A hierarchy of well defined, vital commercial areas meeting the retail shopping, entertainment and service needs of Fremont residents**

Taken as a whole, the above goals lead to one commercial Land Use Goal:

LAND USE (LU) GOAL 2:
Commercial development focused in well defined commercial areas

Figure 3-8 presents a summary of land use designations, intensities of development and employment.

Citywide Commercial Land Use Policies

Policy LU 2.1: Commercial uses shall generally be located in well defined commercial areas. The commercial land use designations allowed within Fremont are shown in Table 3-5.

Policy LU 2.2: Floor Area Ratios (FAR) shown in Table 3-5 are thresholds which shall be applied to all commercial projects. Floor Area Ratios are the ratio of gross building area (exclusive of parking) to net lot area. Thresholds indicate the FAR allowed under conventional development. A higher FAR may be granted at the discretion of

the City Council if a project meets one or more of the following criteria. Development policies shall be created to provide examples of how these criteria can be met.

- Extraordinary benefits to the City
- Unique circumstances of the project which would reduce its impacts in comparison to other projects (e.g., less than normal traffic generation)
- Transfer of development right between parcels of land in the vicinity of the project

Implementation 1: The zoning ordinance for commercial uses shall incorporate Floor Area Ratios.

Implementation 2: The zoning ordinance shall be modified to define transfer of development right procedures and conditions.

Policy LU 2.3: Building heights shown in Table 3-5 are thresholds which shall be applied to all commercial projects. Thresholds indicate the maximum height allowed under conventional development. However, additional building height may be granted at the discretion of the City Council if a project meets one or more of the following criteria:

- Extraordinary benefits to the City
- Unique circumstances or special project design which would reduce its impacts in comparison to other projects (e.g., designs which reduce its shadowing impacts)

Table 3-5
Commercial Land Use Designations, Intensity and Height
(the following FAR's and heights are thresholds)

	FAR*	Height	Average Estimated Employees/Acre**
Central Business District			
Within 1/2 mile of BART Stn.	.8	none	116.2
Other areas	.50	none	49.5
Community Commercial Center	.50	40 ft.	57.3
Neighborhood Commercial Center	.30	35 ft.	26.1
Thoroughfare Commercial	.30	35 ft.	26.1
High Volume Commercial	.25	40 ft.	21.8
Office Commercial	.30	35 ft.	50.3
Mixed Use (Commercial/ Residential)	.50	40 ft.***	22.9

* FAR: Floor Area Ratios

** The City's infrastructure planning is based on assumptions regarding the average number of employees expected to be generated for different types of land uses. That expectation for commercial uses is shown in this last column. Projects which have a likelihood of significantly exceeding this average may require additional environmental impact assessment to review whether the infrastructure, and especially roads, can accommodate the additional employment. This number does not limit the number of employees located in a particular site.

*** Height threshold adjacent to Community Commercial Centers, no height limit adjacent to CBD

Central Business District

It is the intent of the City to have a vibrant, Central Business District which is the focal point for the City.

Allowed Uses

Policy LU 2.4: The following list of allowed uses for the CBD is descriptive rather than fully inclusive. Other uses may be allowed which achieve the intent of the plan as described in the Goals and Objectives and in the design and development policies.

Offices: All office uses are allowed in the CBD including those considered to have a regional or sub-regional market area. Highest intensity of office use should be located within a half mile of the BART station/transit hub to promote a transit orientation and limit the auto impacts of higher density development.

Retail: All retail uses are allowed, including retail uses with a regional market area such as department stores and large apparel stores. Neighborhood-serving retail uses (such as grocery stores), shall generally be discouraged within a half mile of BART, except when incidental to office development.

Services: All service uses are allowed in the CBD. Gas stations are allowed only in locations which minimize impact on the commercial and pedestrian character of the area.

Medical: Medical uses should be located near Washington Hospital or the Kaiser Clinic to facilitate ease of access between medical facilities and concentration of medical uses.

Entertainment Cultural Facilities: Such uses shall be encouraged anywhere within the CBD. Movie theaters should be discouraged except as an incidental use within one half mile of the BART station.

Eating and Drinking Establishments: Such uses shall be allowed within the CBD. Design of "fast-food" restaurants shall be reviewed to ensure such establishments are pedestrian oriented and promote a pedestrian oriented environment. Drive-through restaurants shall not be allowed.

Mixed Use: A mix of residential and commercial uses may be allowed in the CBD designated area as a Planned District development. To concentrate and focus the CBD, it is expected that some areas currently designated for commercial use will be modified to permit mixed use or higher density residential use, depending on location. In the interim, before a design and development plan is prepared, a mixed use project on the periphery of the CBD may be permitted when such a project incorporates housing for low income households. Any such project must be a Planned Development. A wholly residential project shall not be permitted in the CBD designated area.

Policy LU 2.5: The following uses are generally inappropriate for the CBD:

- Auto repair and auto sales
- High volume retail (see "High Volume Retail" section in this Chapter)
- Wholesale uses except as incidental to retail uses

CBD Design and Development Policies

Policy LU 2.6: Development of the CBD should be guided by a design and development plan which identifies a limited core area for very high intensity development, and other sub-areas as necessary or appropriate. Projects within one-half mile of the BART Station should be high intensity, or be phased and designed so as to not preclude the long-term achievement of a high intensity core area.

Implementation 1: A specific plan or other design and development plan shall be prepared for the CBD.

Implementation 2: Until a more detailed plan is prepared, all projects within the CBD area will be subject to discretionary review for conformance with land use and design and development policies.

Policy LU 2.7: Site design and building development in the Central Business District shall be oriented toward pedestrians and transit. To maintain an active pedestrian environment, buildings oriented towards streets, sidewalks or public plazas shall be strongly encouraged. Retail uses shall be encouraged at the ground level. Building orientation, setbacks, parking locations and building design shall be evaluated for how each element encourages continuity between developments.

Implementation 1: The proposed design and development plan shall include guidelines for improving and maintaining an active pedestrian environment in appropriate sections of the CBD.

Policy LU 2.8 Central Business District developments shall provide safe, convenient and continuous pedestrian walkways linking building entrances to street sidewalks, crossings, and linking building entrances to adjacent building entrances activity centers and transit as illustrated in the Central Business District Central Area Conceptual Pedestrian Connection Plan. Esplanades shall be provided where designated on the Plan. Elements of the system shall be provided in new projects or in existing projects when significant modifications are made in an existing development.

Implementation 1: Developments shall provide for inter-block and intra-block pedestrian circulation. Pedways shall be provided linking: 1) building entrances to street sidewalks, crossings and bus stops, and 2) building entrances to adjacent buildings and activities (such as public plazas) where appropriate.

Policy LU 2.9: Public open spaces and plazas shall be strongly encouraged throughout the CBD. Such areas should be visible and accessible from public walkways and be appropriately landscaped with opportunities offered for sitting.

Implementation 1: Consider establishing incentives to implement the above policy as part of the proposed CBD design and development plan.

Policy LU 2.10: Encourage publicly visible art works in new private developments and in public spaces.

Implementation 1: Consider establishing incentives or requiring that a proportion of project development costs be devoted to publicly visible art works.

Community Commercial Center

Allowed Uses

Policy LU 2.11: The following list of allowed uses for Community Commercial Centers is descriptive rather than fully inclusive. Other uses may be allowed which achieve the intent of the plan as described in the Goals and Objectives and in the design and development policies.

Offices: The focus of office uses should be to provide neighborhood and City-wide services, such as real estate, accounting, small business offices, etc. Regionally-oriented offices are allowed.

Services: All local-serving commercial services are generally allowed including those related to finance, real estate, insurance, business services, home services, personal services and others. Auto services (including repair, gas stations and cleaning), drive-in services (e.g., drive-up banks), and equipment leasing and rental can be allowed in a CCC district if the use does not have a significant negative impact on the CCC's visual character and pedestrian orientation.

Retail: Uses serving several neighborhoods are encouraged, including grocery stores, drug stores, liquor stores, specialty retail stores, and other sales. Regionally oriented retail sales could be located in CCC areas if the design of the use can also be compatible with the visual characteristics and pedestrian orientation of the area. Regionally oriented retail sales are encouraged to locate in the Central Business District. High volume retail sales establishments (as defined in the "High Volume Retail" section of this Chapter) are not permitted in CCC areas but are encouraged in areas designated for high volume retail sales.

Wholesale: Wholesale businesses are allowed if incidental or connected to a retail sales business. Other wholesaling, warehousing and distribution can be conditionally allowed so long as the uses are compatible with the retail and service character of the area.

Eating and Drinking Establishments: Such establishments are allowed. Fast-food type restaurants are allowed to the degree they can be incorporated into the character of a pedestrian-oriented commercial center. Drive-through restaurants are discouraged unless the drive-through can be oriented so as to be compatible with the visual character and pedestrian orientation of the area.

Mixed Use: Residential uses are allowed as an incidental use within a CCC, with the primary use being retail and/or offices. A mix of residential and commercial uses may be allowed in a CCC designated area as a Planned Development. A wholly residential development is not allowed in CCC areas. Mixed residential/commercial developments with residences being the primary or major use are not allowed within a CCC area. However, mixed use development is appropriate for the edges of a designated CCC area. Design and development plans recommended for the CCC districts (discussed below) may allow for mixed use development on the edges of the CCC area to foster vitality and pedestrian activity in the CCC. In Historic Overlay Districts, single family residences may be associated with commercial uses in a mixed use development.

Implementation 1: Amend the zoning ordinance to allow single family homes which exist as the sole use on the lot, existing as of May 7, 1991, in Community Commercial Centers, to be exempt from regulations which limit expansion or rebuilding of the structure.

Hotels Motels: Hotels, motels and other lodging facilities are allowed which are consistent with the scale and character of the CCC. Lodging facilities should be integrated into the CCC district to the degree feasible, with commercial frontages maintained on main commercial streets, where appropriate.

Design and Development Policies

Due to the differences between the various CCC areas, the following policies are divided into those which relate to all CCC areas, and those which apply to some or only one of those areas. To further refine and understand the intent of these policies, the discussion of Planning Areas (following section) discusses how these policies should be applied to each Planning Area.

All CCC Areas. The following policies apply to all CCC areas:

Policy LU 2.12: CCC areas shall be limited to those designated in this General Plan.

Policy LU 2.13: CCC areas may be enlarged if a proposed increase in size is consistent with the concept of concentration and integration of uses, or if an increase is necessary to accommodate a particular proposed use that could not otherwise be readily accommodated within the existing designated CCC area.

Implementation 1: Proposed modifications in General Plan designations and zoning shall be reviewed for conformance with the above policy.

Policy LU 2.14: A CCC should be a pedestrian oriented commercial environment. To maintain an active pedestrian environment, buildings oriented toward sidewalks or public plazas and walkways shall be strongly encouraged. Retail uses shall be encouraged at the ground level.

Implementation 1: The proposed design and development plan shall include guidelines for improving and maintaining an active pedestrian environment.

Four Historic Districts. The following policies apply to the four historic CCC districts: Irvington, Centerville, Mission San Jose and Niles.

Policy LU 2.15: Community Commercial developments shall provide safe, convenient and continuous pedestrian walkways linking building entrances to street sidewalks and crossings, and linking building entrances to adjacent building entrances and activity centers where appropriate.

Policy LU 2.16: Development of the CCC area should be guided by a design and development plan. The plan should assess the appropriate area needed for

commercial uses and recommend alternative uses (including mixed use) for areas outside the identified commercial center. The plan should also identify parking strategies for the commercial area as a whole so as to foster a pedestrian oriented shopping environment. The plan should address historic preservation and design guidelines for each CCC.

Implementation 1: A specific plan or other design and development plan or guidelines shall be prepared for each of the four historic districts.

Implementation 2: The design guidelines being prepared for a portion of the Irvington CCC shall be completed and adopted. Additional land use analysis for Irvington should be conducted. Consideration should be given to the impact of BART on the area and BART design plans should be carefully reviewed for compatibility with the character and long term vitality of the commercial area.

Policy LU 2.17: Each of the four historic commercial centers shall be oriented toward pedestrians to the degree feasible. New development should strengthen the "Main Street" character of these areas. Projects should be planned to create active pedestrian frontages oriented towards sidewalks, streets or, when appropriate, towards a public plaza.

Implementation 1: Design and development plans should include designation of a pedestrian network.

Policy LU 2.18: Where appropriate, buildings shall be oriented toward the street and sidewalk. Whenever feasible, parking should be at the rear of buildings or in joint parking areas rather than in front of buildings and businesses.

Policy LU 2.19: New development projects should be integrated with existing development in regards to design, scale and character. Existing Street trees and landscaping should be conserved.

Implementation 1: The proposed design and development plans shall include guidelines for integration of uses, for transitions between uses and intensities, and more specific guidelines for intensity of use.

Implementation 2: Until a design and development plan is prepared for each area, proposed developments should be reviewed for conformance with the intent of this policy.

Centerville. A Specific Plan is being prepared for Centerville. Upon adoption, its land use recommendations will be implemented. In the interim, the following land use policy applies.

Policy LU 2.20: All new buildings or changes in use proposed within the Centerville Study Area shall be subject to discretionary review. The review will consider the potential for a proposed project to hinder the specific planning process. Uses which have no potential for serious conflicts with the contemplated specific plan or planning process will be allowed under the existing General Plan designation.

Warm Springs and Mowry/Blacow. The following policy applies to the CCC areas at Mowry Avenue and Blacow Road, and at Warm Springs and Mission Boulevards. To achieve increased pedestrian orientation, future development should focus and integrate the existing developed CCC area.

Policy LU 2.21: New development shall be oriented toward integrating and connecting the designated CCC. Site development planning should establish connections between parcels and development projects. Building orientation, setbacks, parking locations and building design shall be evaluated for how each element encourages continuity.

Northern Plain (Ardenwood). The following policy applies to the proposed Northern Plain CCC area located in the Ardenwood Forest area:

Policy LU 2.22: The designated CCC area should be designed so as to create an integrated shopping and service commercial area, oriented as much as feasible to pedestrians. It should be visually integrated with and, if feasible, physically connected to the surrounding neighborhood.

Neighborhood Commercial

Allowed Uses

Policy LU 2.23: The following list of allowed uses for Neighborhood Commercial Centers is descriptive rather than fully inclusive. Other uses may be allowed which achieve the intent of the plan as described in the Goals and Objectives and in the design and development policies. Residential uses are not permitted.

Retail: Neighborhood serving retail uses, such as a food store, drug store, liquor store, small hardware or variety store, are allowed. Department stores and other large retail outlets should not be allowed.

Services: All neighborhood-serving commercial services are generally allowed including branch banks and personal services such as cleaners, video rental and shoe repair. Gas stations may be allowed in locations easily accessible to arterials and/or collector streets. Auto repair, except as part of a gas station, shall not be permitted.

Eating and Drinking Establishments: Eating establishments are permitted. Drinking establishments and drive-through restaurants are discouraged unless the drive-through can be oriented so as to be compatible with the character and pedestrian orientation of the shopping area.

Offices: Offices may be allowed only if they are oriented towards neighborhood services, such as accountant/tax services, real estate services, insurance services and the like.

Implementation 1: The zoning ordinance shall be modified where necessary to be in conformance with this policy.

Design and Development Policies

Policy LU 2.24: Neighborhood commercial areas are smaller shopping areas which provide a variety of convenience goods and services to a surrounding neighborhood. To provide the appropriate mix of goods without competing with Community

Commercial Centers, they should be no smaller than three acres and no larger than ten acres. It should be noted that some designated Neighborhood Commercial areas are not associated with a neighborhood and some do not meet the criteria of size and concentration of uses. These areas are shown as Neighborhood Commercial on the land use plan due to their current mix of uses.

Policy LU 2.25: Each residential neighborhood should be adequately served with goods and services. Proposals for new Neighborhood Commercial areas shall identify the market area to be served and the mix of uses proposed. The evaluation of proposals for a Neighborhood Commercial designation on land not currently so designated shall consider whether existing Neighborhood Commercial areas could accommodate the proposed uses.

Policy LU 2.26: Neighborhood Commercial centers should generally be developed as a single project, with a theme and consistent architectural style and materials. A design theme should be appropriate to the area in which it is located.

Thoroughfare Commercial

Allowed Uses

Policy LU 2.27: The following list of allowed uses for Thoroughfare Commercial areas is descriptive rather than fully inclusive. Other uses may be allowed which achieve the intent of the plan as described in the Goals and Objectives and in the design and development policies. Residential uses are not permitted.

Retail: Small stores providing a range of convenience goods (including groceries) and other uses clearly serving the motoring public are allowed. Small convenience stores incidental to gas sales are generally allowed. Auto sales are allowed. Any retail use is subject to meeting the conditions discussed under "Design and Development" policies and other conditions regarding compatibility with surrounding uses as may be defined in the zoning ordinance.

Services: Gas stations, including those with integral repair and cleaning facilities, are allowed. Office uses are not allowed except as incidental to other uses.

Eating and Drinking Establishments: These uses are allowed, including drive-through.

Hotel/Motel: Lodging facilities of all kinds are permitted.

Design and Development Policies

Policy LU 2.28: The thoroughfare commercial designation shall apply to uses which primarily serve the traveling public and/or are inappropriate for commercial centers, as described under "Allowed Uses." This use designation should not be applied to projects which primarily provide goods and services to a neighborhood or community (e.g., dry cleaning, audio-video stores, specialty food stores, etc).

Policy LU 2.29: Thoroughfare Commercial uses shall be located on an arterial street with a high volume of through traffic. Sufficient roadway width or alternative access points shall permit access to the commercial site without significant impacts on the carrying capacity or safety of the road. Appropriate locations are near freeway interchanges and along the City's arterials, and especially at intersections of arterials. Locations on collector streets shall generally be discouraged.

Implementation 1: All Thoroughfare Commercial uses shall be subject to discretionary review and approval to ensure the intent of this policy is carried out.

Policy LU 2.30: All proposed uses in a Thoroughfare Commercial designated area should be evaluated to determine that the use is primarily oriented toward the motoring public or is inappropriate to an existing commercial area.

Implementation 1: All thoroughfare commercial uses shall be subject to discretionary review and approval to ensure the intent of this policy is carried out.

Policy LU 2.31: Thoroughfare Commercial designation shall generally not be applied adjacent to or within a quarter mile of another commercially designated area of the City unless the proposed use is inappropriate for the existing commercial area and is clearly oriented toward serving the motoring public.

Implementation 1: Any proposed General Plan amendment for a Thoroughfare Commercial designation shall be reviewed for conformance with the above policy.

Policy LU 2.32: Thoroughfare Commercial uses shall be designed to be compatible with surrounding uses and/or compatible with the design theme of a district or planning area (e.g., "Mission" style in Mission San Jose). Because such uses are often in highly visible locations, such uses should be attractive additions to the City's environment, incorporating appropriate landscaping and other design features.

High-Volume Retail

Allowed Uses

Policy LU 2.33: "High Volume Retail" uses commonly have relatively large floor areas, do a very high sales volume, and generally sell bulky or large quantity goods. These types of uses usually require easy auto access and visibility from major transportation corridors. The following list of allowed uses for High-Volume Retail areas is descriptive rather than fully inclusive. Other uses may be allowed which achieve the intent of the plan as described in the Goals and Objectives and in the design and development policies. Residential uses are not allowed.

Warehouse/Retail: These types of retail stores provide a wide mix of bulk retail goods. The stores include very low overhead "warehouse" type interiors and do both wholesale and retail trade. They have very large floor areas. Smaller retail stores should be located in other commercial areas, as should any store devoted primarily to food or apparel sales.

Furniture Outlets: These stores include a wide range of furniture and other home furnishings. Similar to the warehouse retail store, these outlets generally include low-overhead, "warehouse" type environments.

Home Improvement: These large stores carry a wide range of home improvement goods from lumber to standard hardware, and may include planting and yard material.

Auto Sales: The Fremont auto-mall is a high volume sales area which generally requires large "floor-areas." The auto mall has therefore been identified as a High Volume Commercial area. However, other high-volume oriented retail uses should not be allowed in this area in order to reserve land (and road capacity) for expansion of auto-related sales and services.

Eating and Drinking Establishments: These uses are allowed.

Design and Development Policies

Two areas in the City are designated for high-volume retail stores. One is the existing area near Stevenson and Albrae, and the other is the proposed Fremont Auto Mall west of I-880. At present, there is insufficient road capacity to permit a significant increase in retail development beyond that currently planned in either of those areas.

Policy LU 2.34: Expansion of currently designated High Volume Commercial areas should be allowed only when roadway capacity can be increased or projected congestion can be mitigated.

Implementation 1: Additions to these areas shall be considered only when proposals incorporate necessary mitigations as identified in the policy.

Policy LU 2.35: An area can be designated High Volume Commercial if sufficient market demand indicates additional area within the City is required for this use. The criteria to be used in assessing whether to designate a site High Volume Commercial shall include the following:

- Convenient access from a freeway. Visibility from the freeway is preferred.

- Convenient access from an arterial with sufficient road capacity to accommodate expected traffic at acceptable levels of service and without adverse impacts on existing residential or industrial uses.

- The proposed retail sales area would not have an impact on existing industrial uses, and is not in the midst of existing industrial uses.

Policy LU 2.36: High-volume retail stores shall only be allowed in industrially designated areas meeting the identified criteria for conversion to a High Volume Commercial designation. High volume retail stores should not be allowed in existing Community Commercial and shall be prohibited in Neighborhood Commercial areas.

Office Commercial

Allowed Uses

Policy LU 2.37: The following list of allowed uses for Office Commercial areas is descriptive rather than fully inclusive. Other uses may be allowed which achieve the intent of the plan as described in the Goals and Objectives and in the design and development policies.

New residential uses are not allowed. Existing single family homes, which are the sole use on the lot, existing as of May 7, 1991, are exempt from regulations which limit expansion or rebuilding of the structure.

Office Uses: All office uses are allowed. Regionally oriented office uses are permitted in areas with sufficient auto access (see Design and Development Policies).

Retail Uses: Accessory or incidental retail uses serving the office uses, including eating and drinking establishments, shall generally be permitted. Drive-through restaurants shall not be permitted.

Design and Development Policies

Policy LU 2.38: Neighborhood serving office uses are encouraged to be located in Neighborhood or Community Commercial Centers, citywide services to be within the Community Commercial or Central Business District areas, and regional office uses within the CBD.

Policy LU 2.39: Regionally oriented office uses may be allowed outside of the CBD in areas designated office commercial and meeting one or both of the following criteria:

- Convenient access from a freeway, or
- Convenient access from an arterial with sufficient road capacity to accommodate expected traffic at acceptable levels of service and without significant impacts on existing residential or industrial uses and meeting the following criteria:
    - Providing transit linkages or alternate transportation means to assure the traffic impact for the proposed development is equivalent to a project constructed to the office commercial building intensity standard found in Table 3-5.

Policy LU 2.40: New office developments shall be designed to be compatible with and complement nearby development, especially nearby or adjacent residential development.

Industrial Development

One of the City's Fundamental Goals (**F-9**) is a large, diversified industrial base to meet the employment needs of the City's workforce. A goal in the Local Economy Chapter (LE 1) paraphrases the Fundamental Goal: Increased job opportunities in Fremont for Fremont residents. These goals lead to the following industrial land use goal:

LAND USE (LU) GOAL 3:
Sufficient industrial land to provide a diversified industrial base to meet the employment needs of the City's present and future workforce

Citywide Industrial Land Use Policies

Policy LU 3.1: Industrial areas within the City shall receive one of three industrial land use designations, as shown in Table 3-6.

Table 3-6
Industrial Land Uses: Intensity and Height

	FAR*	Height***	Average Employees/ Acre**
General Industrial	.35	40 feet	35
Light industrial	.35	40 feet	35
Restricted Industrial	.35	40 feet	35
Warehouses in any industrial area:	.45	60 feet	20

* Floor Area Ratios

** The City's infrastructure planning is based on assumptions regarding the average number of employees generated for different types of land uses. That expectation for industrial uses is shown in the last column of Table 3-6. Actual employment intensities for any site may vary from 10 employees per acre for some types of warehousing to 60+ employees per acre for more employee-intensive uses such as research and development and administrative offices. Proposed projects which have a high likelihood of significantly exceeding the average will generally require additional environmental impact assessment to review whether the infrastructure, and especially roads, can accommodate the additional employment. The employees per acre figure is not meant to limit the number of employees located at a particular site.

*** Flexibility is permitted as per Policy LU 3.7

Allowed Uses

Policy LU 3.2: The following list of allowed uses for each industrial designation is descriptive rather than fully inclusive. Other uses may be allowed which achieve the intent of this Plan as described in the Goals and Objectives and other development policies. Residential uses are not allowed in any area designated for industrial land use.

General Industrial: This is the broadest industrial category allowing all types of industrial uses, including warehousing, distribution and wholesaling businesses. However, certain industries with significant environmental impacts (e.g., noise, or dust), nuisance or hazardous characteristics can only locate in areas with this designation. Examples of these industries include extractive and primary processing industries, a proposed refuse transfer center, and large manufacturing and assembly plants.

Warehouse retail uses are permitted as a conditional use on sites which meet the criteria contained in Policy LU 2.35.

Restricted Industrial: This land use designation is reserved for a wide variety of research and development activities such as product development, engineering, sales, administration, and basic research functions. Manufacturing would also be allowed, so long as any functional or operational characteristics of a hazardous or nuisance nature can be mitigated through design controls. Warehousing, wholesaling and distribution can be allowed if a finding is made that they can be conducted in a manner consistent with the character of the designated area. The restricted industrial land use areas are characterized by superior architectural and landscaping treatment and site planning.

Light Industrial: This designation is intended for a wide variety of industrial uses which are generally oriented toward serving local businesses and residents. These include auto repair and servicing, machine shops, cabinet shops, small warehouse and delivery operations, small wholesale businesses, printing and other smaller industrial operations. Light industrial areas are generally in the vicinity of residential or commercial areas.

Policy LU 3.3: Commercial uses providing necessary services for industrial uses and workers may be allowed in industrially designated areas, with the exception of "Light Industrial". All commercial uses are subject to discretionary review to ensure the use principally serves industrial uses and their employees. Appropriate non-industrial uses include copying services, branch banks, eating and drinking establishments, convenience shopping and gas stations.

Implementation 1: Proposed non-industrial commercial uses in industrially designated areas shall be subject to discretionary review (use permit or zoning administrator permit) to ensure conformance with the above policy.

Policy LU 3.4: Public and private recreation facilities and parks may be allowed in an industrial area.

Implementation 1: The zoning code shall be in conformance with the above policy. Conditions shall be established to ensure the health, safety and welfare of recreational users and limit impacts on nearby industries.

Policy LU 3.5: Wholesale and retail sales of goods manufactured or assembled on-site are allowed uses in industrial areas. Retail sale of large, heavy equipment and industrial machinery may be allowed in industrial areas.

Implementation 1: Proposed sales of large equipment shall be subject to discretionary review (use or zoning administrator's permit).

Industrial Design and Development Policies

Policy LU 3.6: Floor Area Ratios (FAR) shown in Table 3-6 are thresholds which shall be applied to all industrial projects, at the time of project construction. Floor Area Ratios are the ratio of gross building area (exclusive of a parking structure) to net lot area. Thresholds indicate the allowed FAR under conventional development. A higher FAR may be granted at the City's discretion based on one or more of the following criteria. Development policies shall be created to provide examples of how these criteria can be met.

- Extraordinary benefits to the City
- Unique circumstances of the project which would reduce its impacts in comparison to other projects (e.g., less than normal traffic generation)
- Unique building requirements of a particular industrial use
- Transfer of development potential between parcels of land in the vicinity of the project

Implementation 1: The zoning code for industrial uses shall incorporate Floor Area Ratios.

Implementation 2: Because of the higher permitted FAR for warehouse buildings, standards shall be established to ensure that such buildings are developed and maintained as warehouses. Until standards are adopted, warehousing shall be defined as buildings with 90 percent of the floor area devoted to storage and warehouse purposes.

Policy LU 3.7: Building heights shown in Table 3-6 are thresholds which shall be applied to all industrial projects. Thresholds indicate the maximum height permitted under conventional development. However, additional building height may be granted at the City's discretion based on one or more of the following criteria:

- Extraordinary benefits to the City
- Unique circumstances or special project design which would reduce its impacts in comparison to other projects
- Unique building requirements of a particular industrial use

Policy LU 3.8: Industrial uses in areas designated light industrial should be compatible with nearby commercial or residential uses.

Implementation 1: Uses in areas designated Light Industrial shall generally be subject to discretionary review (use or zoning administrators permit).

Implementation 2: The zoning code shall be in conformance with the above policy.

Policy LU 3.9: Designated industrial areas shall be reserved for industrial uses and related commercial activities. However, the City may consider General Plan Amendments to convert industrially designated land to an alternative use. The following criteria shall be used in evaluating all proposed conversions:

- Conversion of the site to a non-industrial use would not substantially affect the viability of existing and future nearby industrial uses.

- The non-industrial use proposed for the site must be appropriate for the location. In particular conversion to residential uses, shall have sufficient neighborhood services including parks, schools and neighborhood commercial uses. Alternatively, the proposed residential uses shall be near an existing residential area having sufficient neighborhood services to serve the proposed conversion area without significant negative impacts on those services.

- Changes in land use to residential shall not occur unless noise factors affecting the potential residential land use can be mitigated so as to meet the noise standards found in the Health and Safety chapter of the Plan and unless light factors can be mitigated to eliminate glare onto proposed residential uses.

Examples of criteria applicable to some conversions include:

- The industrial site is isolated from other industrial areas.

- The industrial site is substantially undeveloped, or is developed with older and/or obsolete industrial facilities.

- Continued industrial use of the site has the potential to have a significant negative impact on other uses, and especially nearby residential areas.

Implementation 1: A request for General Plan amendment from industrial to residential use shall be reviewed and evaluated for its conformance with the above criteria.

Policy LU 3.10: The City will consider an ordinance to create a heavy industrial land use compatibility zone. The purpose of the zone is to assure long term predictability of compatible land uses around heavy industry.

Policy LU 3.11: Portions of areas designated for industrial use west of I-880 are constrained due to underlying geologic conditions (high potential for liquefaction and/or shaking during an earthquake) and/or have biologically sensitive seasonal or other wetlands (see the Health and Safety and Natural Resource Chapters for locations). Early assessment of environmental constraints and resources should be conducted and submitted with applications for development. Early consultation with the City regarding the implications of the environmental assessment for proposed development is recommended.

The City's open space land use policies have multiple goals, most of which are described in the Fundamental Goals, Open Space, Natural Resource and Health and Safety Chapters of this General Plan. In particular, the following Fundamental Goals are applicable:

F 7 AN OPEN SPACE FRAME THAT INCLUDES THE HILLFACE, BAY WETLANDS AND GATEWAYS

F 2 AN HARMONIOUS BLEND OF THE NATURAL AND BUILT ENVIRONMENTS

Goals in the Open Space Chapter relate to the conservation of open space in the hills, protection and enhancement of special habitats and biologically sensitive areas, conservation of other lands committed to open space uses, and provision of parks and recreation facilities to meet the community's needs. In addition, the Open Space Chapter calls for a network of pedestrian trails. The Health and Safety Chapter calls for limiting development in high risk areas, such as areas subject to flooding, land slide, earth movement and others.

The following Land Use Goal summarizes many of the open space goals found in other chapters:

LAND USE (LU) GOAL 4:
Conservation of the City's open space resources

The following Open Space policies are adopted to achieve this goal:

Open Space Land Use Designations

Allowed Uses

Policy LU 4.1: The following list of allowed uses for each Open Space designation is descriptive rather than fully inclusive. Other uses may be allowed which achieve the intent of this Plan as described in the Goals and Objectives and other development policies.

Agriculture: Cultivation of crops, raising (and grazing) of livestock, salt harvesting, plant nurseries are allowed. Very low density residential uses and buildings devoted to agricultural uses (e.g., barns, green houses, etc.) are also allowed. (See Table 3-7.)

Hill Face Open Space: This designation applies to all areas between the "Toe of the Hill" and the "Ridgeline," as shown on the Planning Area Land Use Diagrams and Summary Map. Very low density residential use are allowed, depending on the availability of urban services, access and site-specific constraints (see "Hill Planning Area" for further discussion). Agricultural uses are allowed.

Hill Open Space: This designation applies to the remainder of the Hill Area, outside of the Hillface and above the Toe of the Hill. Very low density residential use are allowed, depending on the availability of urban services, access and site-specific constraints (see "Hill Planning Area" for further discussion). Agricultural uses are allowed.

Institutional Open Space: Institutional open space is publicly held land permanently committed to open space uses (including parks, agriculture, recreation, preservation of biological resource values and natural open space). Most publicly owned open space is designated Institutional Open Space or Public Facility. Privately held land which is required by the Hill Initiative to be designated as Institutional Open Space shall retain that designation.

Private Open Space: Private open space is privately held land permanently committed to open space uses (including parks, agriculture, recreation, preservation of biological resource values and natural open space) by easement, deed restriction, or other encumberance.

Open Space: This designation applies to all other open space areas. Low density residential uses are allowed at a density of one unit per one acre for unconstrained land or one unit per four acres for constrained land, depending on site constraints. A higher density to a maximum of one dwelling unit per acre for constrained lands may be allowed at the discretion of City Council if it finds site constraints can be mitigated.

Most agricultural uses are allowed. Other, more intense agricultural uses may require a conditional use permit.

Areas identified as having any of the following characteristics shall be considered constrained. Any site which has one or more of these constraints shall be given a density of one unit per four acres until the City Council determines that the constraints have been mitigated whereupon the designation can be increased to a maximum of one dwelling unit per acre.

- Severe soil instability
- Class VIII soil as classified by the Soil Conservation Service (United States Department of Agriculture)
- Ground water conditions that may affect or be affected adversely by construction
- Lands which are determined to be an unstable landslide or lands in the path of land with potential for landslide as identified by an onsite geologic investigation or by a survey by United States Geologic Survey
- Lands having slopes in excess of 30 percent (minor encroachments of streets, driveways and buildings onto slopes in excess of 30 percent may be permitted under certain conditions)
- Lands not restricted by constraints but which are inaccessible as a result of having to cross constrained lands
- Lands containing unique natural areas as defined on Figure 9-3
- Lands containing mineral resources as shown on Figure 9-4
- Areas designated S4 or S5 which have moderate to severe ground shaking potential, as shown on Figure 10-3
- Lands rated L3, L4, L5 which have moderate to high liquefaction potential as shown on Figure 10-3
- Areas identified as potential additions to the U.S. Wildlife Refuge by virtue of the presence of wetlands

Design and Development Policies

Policy LU 4.2: Table 3-7 presents the Open Space Land Use designations for the General Plan. All policies related to development in areas designated Hill Face Open Space or Hill Area Open Space are found under "Hill Planning Area."

Policy LU 4.3: Development on land designated Institutional Open Space is limited to compatible recreational and community uses.

Policy LU 4.4: Development of recreational or other public facilities on open space lands should conserve the open space character of the site and minimize impacts on mature landscaping and environmentally sensitive areas.

Policy LU 4.5: Land dedicated to open space as part of development projects shall generally be designated Institutional or Private Open Space. Binding agreements with the City, such as open space easements or deed restrictions, shall be established to permanently protect such areas. Where appropriate, trees should be planted to enhance the open space.

Implementation 1: Land dedicated as open space as part of development projects should be designated Institutional or Private Open Space. Redesignation of such areas should occur periodically as part of a City-initiated General Plan amendment.

Table 3-7
Open Space Land Use Designation***

	Intensity (du/acre*)	Residents/acre***
Agriculture	1 du/20 acres	.14
Hill Face Open Space:		
• Urban Services available:	1 du/5 - 20 acres**	.14 - .55
• No services available:	1 du/20 acres	
Hill Open Space:		
• Urban services available:	1 du/5 - 20 acres	.14 - .55
• No services available:	1 du/20 acres	.14
Institutional Open Space	Does not apply	****
Private Open Space	Does not apply	****
Open Space		
Unconstrained	1 du/acre	2.74
Constrained	1 du/4 acres	.68

* du/acre = dwelling units per gross acre

** Development potential depends on site-specific criteria (see "Hill Planning Area" for further discussion)

*** Assumes 2.74 residents per household

**** No residential units are permitted in this land use category

***** In all open space districts, building height shall not exceed 35 feet. Impervious coverage shall not exceed 15% of the lot area unless additional coverage is approved by use permit.

The "public" designation generally applies to parcels of land owned by a public entity or by utilities which provide required public services such as power.

LAND USE (LU) GOAL 5: Public uses on public land

Policy LU 5.1: The public designations shall be applied when the public use of a site is different from surrounding land uses.

The following land uses are generally designated Public:

- Public plazas
- City facilities
- Publicly owned schools other than Fremont Unified School District schools (including Ohlone College)
- Water treatment facilities
- Other State, County and local government facilities
- Transit agency facilities
- Utilities, where land is owned by the utility

Fremont Unified School District school sites are not designated on the land use diagrams as limited to use for public facilities. However, the locations of existing and projected schools are and shall be identified on the diagrams for informational purposes and when necessary to effect school site reservations.

Implementation 1: The City shall initiate the rezoning of school sites to Planned District.

Policy LU 5.2: Sites designated as "public" on the General Plan are not precluded from a modification in use or from joint development (i.e, a private development on a publicly owned parcel of land). However, any private development on a public site is subject to discretionary review. If the proposed private use is not considered compatible with the existing public use of the site or with surrounding uses, a General Plan amendment will be required to redesignate the site to the proposed

use (e.g., residential, commercial, etc). When a General Plan amendment is required, the Planning Commission and City Council shall consider any proposed use in the context of the surrounding uses and other goals, objectives and policies within this General Plan. However, private uses shall not be permitted in the Civic Center area adjacent to Central Park.

Several Fundamental Goals discuss the importance of the Hill Area to the City's character, and especially the Hill Face. One goal (F 7) is: "**An open space frame that includes the Hill Face, bay wetlands and gateways.**" Overall, the following land use goal relates to the hill area:

GOAL LU 6:
Protection of the sensitive Hill Face and uses in the remainder of the Hill Area consistent with its character and environmental constraints

The following definitions and policies apply, unless specifically noted otherwise, to the five Hill Planning Area subareas within the City's existing boundaries, as follows:

- Base of the Hills
- Hill Face
- Niles Hills
- Vargas Plateau
- Mission Creek

Definitions

Adopted by Initiative on March 16, 1982, by Implementing Ordinance 5344

1. The "Hill Area" includes generally the area lying easterly of a line which begins at the Milpitas City limit, runs north along Route 680 and Mission Boulevard, and then north along Mission Boulevard to the Union City limit. The Hill Area includes Niles Canyon, Mission Pass and the Mission Hills, but excludes a small area at the mouth of the Niles Canyon and at the base of Mission Pass.

2. The "Ridgeline" is a visual ridge as established from a point of origin a distance of one and one-half miles from the ridgeline. The point of origin shall be located along a line lying perpendicular to Mission Boulevard and Warm Springs Boulevard. The point of origin of the ridgelines for Niles Canyon shall be located along Niles Canyon Road and shall be a visual ridge located along a perpendicular to Niles Canyon road. The point of origin of the ridgeline for Mission Pass shall be located along a line lying perpendicular to Route 680.

3. The "Toe of the Hill" shall mean a line along the base of the hills along which the natural grade is a maximum of 20 percent, including Niles Canyon and Route 680 east of Mission Boulevard.

4. The "Hill Face" consists of those lands situated between the Toe of the Hill and the Ridgeline.

5. "Constrained land" is land having a slope of 30 percent or greater, soils which the City determines are unsafe for development, or land which is unaccessible.

Adopted by Initiative

Policy LU 6.1: Residential development shall be prohibited on constrained land, subject to exceptions provided herein. The Planning Commission may allow development on constrained land in order to better conform to the terrain and where all technical conditions for safe development are assured.

Policy LU 6.2: For the Hill Area generally compatible uses are agriculture, recreation and low density residential which complies with standards and densities set out in the General Plan text. The densities set forth below are maximums. The City may provide for lower densities, especially in agricultural preserve areas.

Policy LU 6.3: Areas on the Hill Face and the Ridgeline are hereby redesignated "Hill Face Open Space." Development in this area is limited to a density range between one residential dwelling unit per ten acres and one residential dwelling unit per five acres (.1 TO .2 units per acre). Constrained and unconstrained land may be combined within a single ownership in order to comply with the density requirements herein, provided that there is at least one contiguous acre of unconstrained land per residential dwelling unit. Development on accessible but purely constrained land is limited to one unit per twenty (20) acres (.05 units per acre), provided that a site which meet the other standards herein is available. The density may be increased from the minimum only when development and access is designed and located so as to avoid substantial environmental degradation, and eliminate or substantially eliminate its visibility from any location below the Toe of the Hill within a radius of one mile of the site.

Policy LU 6.4: General Plan designations and densities for the portions of the Hill Area outside the Hill Face and Ridgeline are as follows:

1. Areas currently designated as "Institutional Open Space" or under the control of a public agency shall remain or be designated "Institutional Open Space."

2. Areas designated "Open Space" or "Open Space--Three Acre Estate" are redesignated "Hill Open Space" or, if appropriate "Institutional Open Space."

   Development in the area designated Hill Open Space is limited to one dwelling unit per five (5) acres of land (.2 units per acre). constrained and unconstrained land may be combined within a single ownership in order to comply with the density requirements herein, provided that there is at least one contiguous acre of unconstrained land per residential dwelling unit. Development on accessible but purely constrained land is limited to one unit per twenty (20) acres (.05 units per acre), provided that a site which meets the other standards herein is available.

3. Areas designated "Residential" remain so designated, with the current densities.

Policy LU 6.5: The Development Reserve Overlay (DRO) District is placed on the Hill Area above the water service elevation as established by the Alameda County Water District as of the date of adoption of this amendment [November 3, 1981]. The objective of this overlay is to insure that land is developed in an orderly and timely manner which avoids commitment of the land to residential use before municipal services are available.

a. All new parcels created in the Development Reserve Overlay District shall be limited to one residential dwelling unit per twenty acres.

b. Lands may be removed from the Development Reserve Overlay Area when there are adequate public services including gravity-served public water and sewer systems, fire and police, and public or private streets meeting City standards.

Policy LU 6.6: All rezonings (including Planned districts), permits and approvals for subdivision maps, planned unit developments, grading, conditional uses and all building permits, variances, and other entitlements for use, shall be consistent with these requirements and with the associated designations on the General Plan Summary Map and Area Maps.

Policy LU 6.7: Existing parcels of record as of March 1, 1981 which are below the minimum lot sizes specified herein must comply with all standards herein except standards relating to size. Substandard contiguous parcels in common ownership must recombine. No more than one residential dwelling unit is permitted on any one substandard parcel.

Additional Hill Area Land Use Policies (Not Adopted by Initiative)

Policy LU 6.8: Areas identified as having any of the following characteristics shall be considered constrained (the following supplements definition #5 in the initiative):

- Severe soil instability
- Class VIII soil as classified by the Soil Conservation Service (United State Department of Agriculture)
- Groundwater conditions that may affect or be affected adversely by construction
- Lands which are determined to be an unstable landslide or lands in the path of land with potential for landslide as identified by an on-site geologic investigation or by a survey by the United State Geological Service
- Lands having slopes in excess of 30 percent (minor encroachments of streets, driveways and buildings onto slopes in excess of 30 percent may be permitted under certain conditions)
- Lands not restricted by constraints but which are inaccessible as a result of having to cross constrained lands

Policy LU 6.9: Early assessment of environmental constraints and resources should be conducted and submitted with applications for development. Early consultation with the City regarding the implications of the environmental assessment for proposed development is recommended. Issues to be addressed include geology (e.g., seismicity, soils, slope), biology (e.g., wetlands and riparian zones, landmark trees), mineral resources and visual sensitivity. These resources and constraints are roughly identified in the Natural Resources and Health and Safety Chapters of this plan.

Policy LU 6.10: Due to concerns with the health, safety and welfare of residents, the City shall encourage the Alameda County Water District to provide water facilities in the Hill Area necessary to protect property and the safety of residents. Additional capacity, if any, should be planned in conformance with City policies and regulations for the Hill Area.

Policy LU 6.11: Water service in the Hill Area should be a comprehensive integrated system. The City strongly encourages the Alameda County Water District to provide gravity fed water service in the Hill Face only in conformance with the City's policies and regulations for the Hill Area.

Policy LU 6.12: Transfer of density from higher elevations on the Hill Face and Ridgeline to lower, less visible and sensitive areas of the Hill Area where services can be efficiently and safely provided shall be required whenever feasible.

Policy LU 6.13: No part of a building shall project into the visible plane of the Ridgeline.

Implementation 1: Development standards shall be prepared to implement this policy.

Policy LU 6.14: A study may be undertaken to assess the costs and benefits to the City of extending services and permitting development in the East and West Vargas Plateau and Sheridan Road sub-areas. (see separate Hill Planning Area map for identification of study area).

Issues to be considered in this evaluation include, but are not limited to the following:

- Impacts on water quality, water supply and erosion
- Impacts on the Alameda Creek watershed and water supply
- Impacts on the Hill Face. Every effort should be made to protect the Hill Face from development
- Accessibility to the rest of Fremont
- Impacts on existing urban services
- Impacts on Sanitary District

If development is found to be appropriate, the study should roughly identify both the area proposed for development and a preferred level of development.

A similar study is being prepared by Union City for the Niles Hills subarea. Fremont will make its separate evaluation of the Niles Hills. Any development permitted shall be within the City of Fremont.

Policy LU 6.15: If extension of services and development in portions of the Vargas Plateau subarea and/or Sheridan Road subarea are found to be advisable during the study conducted under Policy 6.14, a second planning effort may be undertaken to develop a "Specific Plan" for the area identified in the first study as appropriate for development.

The Vargas Plateau's two step planning process may be consolidated to a single specific plan to be financed by the land owners, which shall include a Facilities Plan. The ultimate development policies for the plateau will be determined after completion of the Specific Plan.

Policy LU 6.16: The Alameda Creek watershed that drains to the Sunol Valley should be protected from significant negative impacts.

Policy LU 6.17: While planning is underway for the East and West Vargas Plateau and Sheridan Road sub-areas, no additional urban services shall be provided by the City of Fremont to this area and the City shall not consider requests to expand its boundaries or sphere of influence. A minimum

parcel size of 20 acres per unit shall be maintained within the City until services are made available. Proposed subdivisions of five units or more shall be subject to environmental review and to an assessment of the proposed subdivision's impacts on existing City services and roads.

Hill Planning Area Design and Development Policies

The following policies apply, except where noted, to the five Hill Area subareas within the existing City boundaries:

- Base of the Hills
- Hill Face
- Niles Hills
- Vargas Plateau
- Mission Creek

Adopted by Initiative:

Policy LU 6.18: The City shall perform architectural review for any development in the Hill Area in order to insure consistency with the policies of the General Plan. In addition, all development on the Ridgeline and Hill Face shall be subject to discretionary review and must be approved by the Planning Commission, or by the City Council on appeal.

Policy LU 6.19: All development shall be designed to minimize disturbances of the natural terrain and vegetation.

Policy LU 6.20: Development shall utilize clustering, density transfers and other techniques to maximize open space, minimize environmental and visual impact and encourage development in the Hill Area outside the Hill Face and especially outside the portion of the Ridgeline visible from any point below the Toe of the Hill, within a one mile radius of the site.

Supplemental Policies (not adopted by initiative):

Policy LU 6.21: The following Hill Planning Area design and development policies shall also apply to the Mission Hills West area as identified on the separate Hill Planning Area map.

Policy LU 6.22: Developments shall be designed to be compatible with their natural surroundings. Developments shall be designed to maximize retention of natural topographic features, such as drainage swales, slopes, rock outcroppings, vistas, landmark trees, natural foliage and plant formations, historical sites, riparian areas and areas of natural beauty. Development shall minimize disturbances of any natural watercourse or streams and wildlife breeding areas.

Policy LU 6.23: Natural drainage should be utilized whenever feasible, with minimum modification to a natural waterway. The impact on downstream drainage structures shall be considered.

Implementation 1: Projects with the potential to have a significant affect on waterways or streams shall determine the impact on downstream drainage structures and recommend mitigations.

Policy LU 6.24: Hillside development shall conform to the natural grades and not scar the existing terrain and vegetation by excessive grading. Buildings should fit the land, not vice versa.

Policy LU 6.25: Development should minimize erosion and pollutant impacts from construction.

Implementation 1: All proposals for Hill Planning Area buildings shall include a sediment and erosion control plan.

Policy LU 6.26: A variety of building types shall be encouraged in the Hill Planning Area.

Policy LU 6.27: Clustering of units, density transfers and other techniques shall be utilized to reduce the need for earth movement and enable steep hill slopes, wooded areas and areas of special scenic beauty or historic interest to be preserved. The potential to reduce impacts through density transfers shall be considered and used to the maximum extent feasible as early in the development review process as possible.

Policy LU 6.28: Density incentives shall be considered to enable areas to be preserved through dedication to the City in fee or easement.

Policy LU 6.29: Hill area road standards shall reflect the need to minimize scarring, earth movement and the potential for erosion and ground failure, and respect the natural topography of the area.

Policy LU 6.30: Development in excess of 80 homes shall not be permitted in areas served by only one point of access unless public safety and local access needs can otherwise be met. An adequate emergency vehicle accessway shall constitute a point of access.

Policy LU 6.31: Equestrian and hiking trails shall, when feasible, be developed throughout the Hill Area.

Policy LU 6.32: The area outside of the City's eastern boundary extending to land owned by the San Francisco Water Department shall be considered part of the City's planning area. By identifying this area as part of the City's planning area, it is not the City's intent to imply the City's boundaries or sphere of influence will necessarily be expanded to include all or any part of this area. These areas are identified on the separate Hill Area Planning map and are called the Vargas Plateau East subarea, and the Sheridan Road subarea.

Implementation 1: Any efforts to incorporate the Vargas Plateau East or Sheridan Road subareas into another city's sphere of influence shall be actively opposed.

Implementation 2: A planning study shall be undertaken to evaluate the advisability of incorporating this land into the City and/or permitting development, as discussed in Policy LU 6.14 and 6.15.

Overlay Designations and Study Areas

Overlay designations are applied to areas in the City with special constraints or conditions. These areas have an underlying land use designation which indicates a type of development and intensity of use allowed on a parcel. However, an overlay is placed on the land use designation which requires special actions be taken prior to development or redevelopment of the site. Four designations have been established, each of which is discussed in turn below:

- Development Reserve Overlay
- Historic Sites, Buildings and Districts Overlay
- Mineral Resources
- Gateway

The overall goal of the overlay designations is the following:

LAND USE (LU) GOAL 7:
Development plans which consider special site constraints and opportunities

Each of the overlay designations is discussed in turn below.

Development Reserve Overlay

The Development Reserve Overlay (DRO) applies to land without urban services in the Hill Area. The use, definition and application of this overlay designation is discussed under "Hill Planning Area."

Historic Sites, Buildings and Districts Overlay

The Fundamental Goals recognize the importance of maintaining links with history and heritage of community. Historic and archaeological resources within a community enrich it by providing a distinct and unique identity. To preserve that link to Fremont's history, the following land use policies are established:

Policy LU 7.1: In identified historic districts, an overlay designation is created incorporating existing historic buildings and adjacent areas deemed important to the character of the historic district.

Policy LU 7.2: New non-residential construction within historic overlay districts, including modification of an historic building (except single family homes), is subject to review by the Historical Architectural

Review Board (HARB) for consistency of the proposed architecture with the historic character of the area.

Policy LU 7.3: The City shall identify and designate historic buildings and archaeological sites outside of identified Historic Overlay district. Actions to demolish, move or substantially alter the exterior of any designated historic building can be deferred by the Historical Architectural Review Board for up to 90 days. Actions to develop an historic or archaeological resource site may also be deferred for 90 days if the action could be detrimental to the preservation of the historic resource.

Implementation 1: Designated historic and archaeological resources are identified on the General Plan Area Plan diagrams and are listed in the historic resources appendix to this General plan.

Implementation 2: The Historical Architectural Review Board may initiate proceedings to designate additional archaeological sites or historic sites or buildings, although final designating action rests with the City Council.

Policy LU 7.4: City initiated design or development plans for the four existing historic Community Commercial Centers (Centerville, Irvington, Niles and Mission San Jose) shall include historic resource preservation and enhancement as a key element of the plans.

Implementation 1: Historic preservation and enhancement shall be included in the development of specific plans, design or development plans proposed for any historic Community Commercial Center.

Policy LU 7.5: The City shall seek to identify all historic and archaeological resources and maximize the potential for State and Federal funding for the conservation, restoration and enhancement of those resources.

Implementation 1: The heritage resources (listed in Appendix I) have previously been designated by General Plan action as historical resources. The designation of these historic resources is sustained with Plan adoption.

Implementation 2: An historic preservation plan shall be prepared for the City consistent with the Secretary of the Interior's "Standards for Historic Preservation". The plan shall include a comprehensive inventory of historic and archaeological resources.

Mineral Resources

The State has identified mineral resource areas in Fremont which it considers of regional importance. These areas are roughly identified in Figure 9-4 in the Natural Resources Chapter. This diagram should be used in combination with the Planning Area Land Use diagrams to determine location of these resources. Policies related to these resources are found in the Mineral Resources section of the Natural Resources Chapter.

Gateways

The Fundamental Goals establish the importance of maintaining or creating gateways to the City to help distinguish Fremont from its neighbors. Gateways in general are discussed in the Open Space Chapter. Natural gateways are discussed in the Visual Resources Chapter.

To enhance natural gateways and to create gateways on the major entrances to the City, existing and proposed gateways are indicated on the Land Use diagram.

Policy LU 7.6: A Gateway designation is established for major identified gateways into the City, as shown on the General Plan land use diagrams. For each gateway area, the City shall work with private developers to provide a gateway feature or to enhance the character of a natural gateway through landscaping, building and site design.

Study Areas

In preparing this General Plan, several sites were identified where conversion to an alternative use may be appropriate. However, more analysis is required prior to making a final determination on a modification in land use. These areas are identified on Planning Area diagrams as "Study Areas." Two of the Study Areas are the subject of a specific plan process: much of the Centerville Community Commercial Center area and the Warm Springs BART Station area. A study for possible modification of land use in the Fremont Shores area west of I-880 is proposed.

Two different policies are adopted, depending on the character of the recommended change. For smaller study areas, a tentative land use (e.g., commercial, residential or industrial) is shown on the Planning Area Diagram

identifying the land use direction desired by the City for the site. Also identified are more specific land use alternatives which are to be considered during a study process.

A second policy is adopted for larger study areas (Warm Springs, Centerville, Vargas Plateau/Sheridan Road, Northern Plain and Fremont Shores) where the land use direction is dependent on the outcome of specific studies and deliberation by the Planning Commission and Council. For these areas, the previously existing land use designation is maintained until the Study is completed.

Policy LU 7.7: A Study Area designation signals the City's intent to apply a land use designation, but where additional analysis is required prior to allowing development on the site. The land use designation shown on the City's Planning Area Land Use Diagram is therefore tentative. Table 3-8 indicates the types of specific land uses potentially appropriate for the site, depending on the outcome of necessary studies. The types of studies will vary from site to site, but can include analysis of potential traffic impacts, impacts of proposed use on adjacent property owners, and site-specific constraints (such as past use of toxic materials) which may influence future uses of the site. Studies can be initiated by the City, property owner or developer.

Policy LU 7.8: The Warm Springs BART Specific Plan Study Area, the Fremont Shores Study Area, the East and West Vargas Plateau/Sheridan Road Sub-Areas and the Centerville Specific Plan Study Area are also identified as "Study Areas." For these areas, all proposed uses shall be reviewed for their potential to further or hinder the achievement of the goals of the study process. Uses which have no potential for significant conflict with any potential recommended land use recommendations of the study will be allowed under existing land use regulations until such time as the proposed study or specific plan is completed and new land use designations are adopted.

Policy LU 7.9: A study designation on a feature shown on the Planning Area Land Use Diagrams indicates an intent to evaluate alternatives to that feature. The following features are identified:

Warm Springs Planning Area

- Toe of the Hill in the far southern portion of the city

- School designation in the far southern hill portion of the city
- Ridge designation in the far southern portion of the city
- Extension of Rancho Higuera Road

Industrial Planning Area

- Connection of Stevenson Boulevard Extension/Cushing Road with Fremont Boulevard

Table 3-8
General Plan Study Areas

SMALLER STUDY AREAS	General Plan Designation[1]	Tentative	Study Alternatives
CENTERVILLE PLANNING AREA			
1. Blacow Road and railroad tracks near Central Avenue (southeast corner)	Industrial	Residential	Low to medium density Residential
IRVINGTON PLANNING AREA			
2. Stevenson Blvd. & Blacow Rd. (southeast corner)	Residential	Commercial	Thoroughfare or Neigh. Commercial
3. Grimmer Blvd. & Yellowstone Park Drive (northeast corner)	Residential	Commercial	Thoroughfare Commercial
MISSION SAN JOSE PLANNING AREA			
4. Mission Blvd/Driscoll Rd. (southwest corner)	Residential	Commercial or Res.	Office Commercial

[1] This General Plan maintains the land use designation in previous 1969-1989 General Plan.

SMALLER STUDY AREAS	General Plan Designation[1]	Tentative	Study Alternatives
NILES PLANNING AREA			
5. Mission Blvd. & King Ave. (northwest corner)	Industrial	Commercial	Neigh. Commercial or Light Industrial
NORTHERN PLAIN PLANNING AREA			
6. Fremont Blvd. & Decoto Rd. (northeast corner)	Residential	Residential w/increased density	Residential or Commercial
WARM SPRINGS PLANNING AREA			
7. End of Starlite Way	Residential 4-6	Residential lower density	Residential lower density

LARGER STUDY AREAS	General Plan Designation
CENTERVILLE PLANNING AREA	
8. Centerville Specific Plan Study Area	Commercial, Residential, Industrial
INDUSTRIAL PLANNING AREA	
9. Warm Springs BART Specific Plan Area	Industrial
10. Fremont Shores Study Area	Industrial
HILL PLANNING AREA[2]	
11. Vargas Plateau/Sheridan Rd.	Open Space, Residential, Agricultural (County)
NORTHERN PLAIN	
12. Open Space-Urban Reserve (area between Paseo Padre Pkwy & Alameda Creek and PG&E right-of-way in the west & Southern Pacific Railroad in east)	Open Space/Private Open Space[3]

[2] Also under study in the Hill Planning Area is the exact location for the Ridgeline and Toe of the Hill and a possible school site location for an area east of I-680 and south of Mission Boulevard (as shown in the Hill Area and Warm Springs Planning Area Maps). Other features of the study are certain roadway alignments. See land use and transportation diagrams for the locations of those study items.

[3] Land uses to be studied include: industrial, residential, open space, private open space, institutional open space and agriculture.

Day Care (Private Sector, Non-Municipal)

The labor participation rates show a growing number of dual working parents and single parents. This indicates a need for care and supervision of children outside the home and outside regular school hours.

Census figures and projections indicate a growing number of elderly people. There are also developmentally disabled persons within Fremont. Both groups may need day care. Frail elderly people as well as the developmentally disabled persons are more often being cared for in the home. Care providers need alternatives outside the home to provide the care either on a regular or intermittent day time basis.

LAND USE (LU) GOAL 8:
Provision and enhancement of day care services through a partnership of all sectors of the community

Policy LU 8.1: To accommodate day care needs of children, frail elderly and developmentally disabled adults, services shall be allowed in any commercial, industrial or residentially designated area, subject to conditions regarding size of facility, access, parking and the availability of outdoor space.

Policy LU 8.2: Care facilities should be located to minimize exposure to noise, localized air pollution sources and other environmental hazards.

Chapter 4
Housing

INTRODUCTION

For the last decade the San Francisco Bay Area has been among the two or three highest housing-cost metropolitan areas in the United States. The availability and cost of housing affect virtually all Fremont residents; from long-time residents whose children cannot afford to live here, to new employees in Fremont seeking to live within an acceptable distance of the place they work.

Fremont cannot single-handedly solve the problem of high housing costs or provide for the region's needs. However, it should try to reduce the impacts of the problem on Fremont residents.

The first two sections of this chapter provide the context for housing policies. The first section presents a profile of Fremont's households and examines existing housing conditions. The second section discusses projected conditions and housing needs. Finally, the third section presents goals, objectives, policies and implementation measures for how the City intends to meet future housing needs. This Chapter and the Housing Background Report, hereby incorporated by reference, constitute the "Housing Element" of the General Plan as required by State Law. The Background Report provides considerable detail on existing conditions, the City's current housing programs, and expected housing needs. The following setting and projections sections summarize the information in the Background Report.

SETTING

Fremont's Households

Fremont was planned to be an economically and socially balanced community. The following description of Fremont's households shows that it has achieved much of that goal.

Type and Size

A household is defined as person(s) who occupy a housing unit. Almost three-quarters of Fremont households were "families" in 1980 (people related by blood or marriage, as defined by the Census). However, less than half of these were traditional nuclear families composed of married husband-wife

couples and children under the age of 18. Almost nine percent of the family households were single parent families. Twenty two percent of all households were individuals or unrelated people living together.

The average size Fremont household in 1990 is 2.8 people, larger than the 2.5 average size for the rest of the Bay Area.

Income

Fremont's average household is somewhat wealthier than the rest of the region, but twenty-seven percent of Fremont's households were considered low or very low income in 1980. An estimated 8,293 Fremont households were very low income, earning less than $21,200 in 1989 (Table 4-1).

Table 4-1
1989 Income Categories for Alameda County***

		% of Households*	Number of Households**
Above Moderate (120%+ of median)	$50,900 +	51%	30,211
Moderate (80-120% of median)	$33,900 - $50,900	22%	13,032
Low (50-80% of median)	$21,200 - $33,900	13%	7,701
Very low (below 50% of median)	Below $21,200	14%	8,293

*** Based on estimated median income for a family of four of $42,400 (1989). Income estimates are prepared annually by the U.S. Department of Housing and Urban Development. Income categories are defined by Federal and State law.

* Percentages of households by income, 1979 (U.S. Census 1980, City of Fremont)

** 1979 percentages applied to 1989 population

Special Households

In addition to being the home for the California Schools for the Deaf and for the Blind, over 900 Fremont residents have disabilities which may require special consideration in the design of housing. An estimated 400 people need emergency shelter in Fremont on any given evening, according to a survey by the Emergency Services Network of Alameda County (1989).

Housing Stock

Fremont's housing stock reflects the community's goal to be economically balanced and provide housing choice for people at all economic levels. Sixty-nine percent of Fremont's housing stock in 1989 was single family homes and the remainder multi-family and mobile homes (Table 4-2). In 1980, 66 percent of Fremont's homes were occupied by homeowners, and 34 percent by renters.

Between 1970 and 1990 Fremont has been one of the fastest growing cities around the Bay, adding an average of almost 1800 housing units a year. However, despite rapid growth, the City had a very low vacancy rate in 1989 of 1.95 percent indicating a tight housing market. The Association of Bay Area Governments (ABAG) estimates Fremont's vacancy rate is half of what is appropriate to reduce inflationary pressures on housing cost and facilitate mobility and choice in the market.

Fremont is a relatively new community with 97% of its housing constructed since 1949. Because Fremont is a young city, the housing stock is in good condition with only a few hundred units identified as needing rehabilitation when surveys were conducted in 1979 and 1981.

Table 4-2
Fremont's Housing Stock by Type of Unit
1984 - 1989

	1984		1989	
Single Family Detached or attached:	35,876	(74%)	42,107	(69%)
2 to 4-unit multi-family	1,416	(3%)	1,585	(3%)
5 or more unit multi-family	10,743	(22%)	16,106	(27%)
Mobile homes	627	(1%)	618	(1%)
TOTAL:	48,662		60,416	

Source: California Department of Finance

Housing Cost

Once known as a relatively "affordable" community for purchasing a home in the Bay Area, high regional demand and a shrinking supply of developable land have increased the value of single family detached housing in Fremont. While the median priced single family detached home in Fremont may still be slightly more affordable than the $265,000 (1989) median for the Bay Area, prices are not significantly different. In order to

purchase the median price home (1989), a household must have an annual income of $85,700 and afford payments of $2,140 per month. While there were condominiums and townhomes affordable to those of moderate income in 1989, the median priced single family detached home has been well beyond the reach of those of moderate means for over ten years.

While for-sale housing is beyond the means of lower income households, rental housing has remained relatively affordable. The median advertised rent for a two bedroom apartment in Southern Alameda County in October, 1989 was $630, well within reach of low income households earning more than $25,000 per year (see Table 4-3). However, for those with incomes below $25,000, and for low income families requiring larger units, finding affordable housing can be very difficult.

Table 4-3
Affordable Monthly Rent by Income Level
Four-Person Household (1989)

	Affordable Rent (30% gross income)	Median Advertised Rent (Oct, 1989)
Above Moderate Income (120%+ of median)	$1270 +	
Moderate Income (80-120% of median)	$850 - 1270	
Low Income (50-80% of median)	$530 - $850	$630
Very low Income (below 50% of median)	Below $530	

Sources: HUD "Information Bulletin Memorandum for all Public Housing Authorities" Feb 1989, HUD Standards of Affordability, City of Fremont

City's Housing Programs

The City has an active and award winning housing program to meet the needs of those whose needs are not met by the market: very low income households and households with special needs such as the elderly, the disabled, and families with children. In the past five years, the City has used tax exempt bonds to finance the development of 2,400 rental units, 522 of which are reserved or with priority for very low income households. The City has used grants and other financing tools to assist in the development of another 170 below market rate units for very low income households, and 32 units for low income households. The City has also participated in programs to assist first-time moderate income home-buyers and to assist the homeless and victims of domestic violence.

The City contracts for services to assist households facing discrimination in the housing market, including families with children. The City provides loan guarantees to assist tenants in paying security deposits or delinquent rent, grants for accessibility improvements for rental units occupied by the disabled, and minor repair grants. A rent stabilization ordinance protects

mobile home owners from sudden substantial increases in rents through 1992 when it "sunsets". The City's other housing services include rental counseling, home seeking assistance and housing rehabilitation loans. The City also contracts with Alameda County for the provision of Federal rental assistance (Section 8).

PROJECTIONS

In the past twenty years, Fremont's economic and social diversity has increased. During the next twenty years that diversity is threatened by the high cost of housing. People of moderate and lower income may increasingly find they cannot afford to locate here. Employers may conclude that they should locate where their workers can find affordable housing.

The future also brings a new stage in Fremont's growth. In the past, most residential development in Fremont has been on relatively large parcels of land. These large parcels were subdivided into new neighborhoods and large multi-family developments. In the next two decades most new residential development will be smaller projects on sites with neighbors who will be concerned that the project fit-in to an existing neighborhood context. Another change will be in the amount of development. In the past Fremont has grown at over twice the average rate for the Bay Area. In the future, the amount of development will slow dramatically as the supply of vacant land dwindles.

The challenge to Fremont's diversity and the change in the nature of development profoundly affect the public policy approaches Fremont follows to meet future housing needs. The assumptions about the future and their implications for public policy are described below.

New Housing

Regional housing demand has almost exhausted Fremont's supply of easily developed land. There were only 789 acres of vacant land planned for residential development at the end of 1989. This land can hold about 1,800 single family homes and 5,200 multi-family units (townhomes, condominiums or apartments) for a total of 7,000 housing units. In addition, an estimated 1,100 single family homes and 1,000 multi-family homes were also approved for development or were under construction at the end of 1989. Finally, this plan has identified several sites for residential development not previously designated for that use. The development potential on these new sites is estimated at 2,600 units (approximately 1,200 in Centerville, 1,200 in the Central Area and the remainder in Niles and the Northern Plain. Almost all units are in non-industrial study areas described in the Land Use section. This is a total development potential of 11,700 units: 8,400 multi-family and 3,300 single family homes.

Table 4-4
Citywide Residential Development Potential, 1990 - 2010

	Single Family	Multi-Family	TOTAL
VACANT, 1989	1,800	5,200	7,000
UNDER DEVELOPMENT	1,100	1,000	2,100
PLAN MODIFICATION	400	2,200	*2,600
TOTAL	3,300	8,400	11,700

* Approximately 2,400 units are in Centerville and Central Area Study Areas. Actual number available is dependent on future City Council approval.

Source: Fremont Community Development Department, 1989

Table 4-4 does not include the development potential of the hills of Fremont above the Toe of the Hill with the exception of known projects. The Hill Face (see Land Use Chapter for definitions) is highly constrained and has very limited development potential. This Plan calls for a study to assess the advisability of permitting significant development east of the Ridgeline. Due to the high degree of uncertainty and wide range of development potential, this plan makes no assumptions regarding development in the area east of the Ridgeline.

Conversion/Redevelopment

The development potential of the City could be increased if land not currently designated for residential development was converted to residential use, or if housing development were to occur on some underutilized parcels. There are several areas in the City where residential development potential could be increased with minimum impacts on existing residential neighborhoods. These include, but are not limited to the following areas:

- Central Business District
- Areas in and around existing community commercial centers
- BART station areas
- Fremont Shores Study Area

Designation of sites for conversion requires detailed planning studies to determine whether residential development is appropriate and how best to provide for new residential development while minimizing negative impacts on existing neighborhoods, commercial and industrial areas while also

ensuring adequate neighborhood services. These studies are proposed in this plan. If future studies and the City Council conclude residential development in some or all of these areas is appropriate, the residential development potential of the City could be increased by 3,000 to 6,000 units, predominantly multi-family housing. The actual amount will depend on the amount of land converted.

Table 4-5 presents the number of units that could be expected in the year 2010 under two scenarios: one assuming build-out of residential development potential under this General Plan, and a second assuming some conversion of some commercial and industrial land to residential use, as discussed above.

Table 4-5
Mix of Housing*, 1989 - 2010

	Existing 1989	No Conversion 2010	Conversion 2010
Single Family Homes	42,100 (70%)	45,400 (63%)	45,600 - 45,800
Multi-Family Homes (condo/apts, mobile)	18,400 (30%)	26,700 (37%)	29,700 - 32,700
TOTAL	60,400	72,100	75,300 - 78,500

Source: Fremont Community Development Department

Existing Housing Supply

The main source of housing in the future is not new housing but turn-over in the existing housing stock. Fremont's housing stock is in excellent condition today, partially because most of it is relatively new. But by the year 2010, the homes built in Fremont in the 1960s and 1970s will be forty or fifty years old and require increased maintenance. In addition, many of these older homes will be modified, modernized and rehabilitated.

The pattern in other Bay Area cities has been for older homes to be expanded to the maximum permitted size, reflecting the increased value of land and homes. Over time, the supply of smaller, older, single family homes suitable for first-time home-buyers is likely to decrease. Furthermore, new construction in existing neighborhoods could have a significant impact on the character of those neighborhoods.

Supply and Demand

Short Term

The Association of Bay Area Governments (ABAG) is required by state law to estimate each locality's share of regional housing needs. ABAG estimates that Fremont's share of need between 1988 and 1995 is for 8,151 new units. Between 1988 and 1989, 3,695 units were built. Therefore, 4,456 units would need to be constructed by 1995 in order to Fremont to meet its share of regional housing need. Fremont has sufficient land planned for residential development to accommodate this need without conversion of industrial or commercial land to residential use.

Long Term

In addition to preparing estimates of need, ABAG also prepares long term growth forecasts for the Bay Region. According to 1990 forecasts, Fremont is projected to add 12,220 households by the year 2005. Fremont currently has sufficient land planned for residential development to accommodate 11,700 units. If additional land is converted to residential use Fremont would be able to accommodate ABAG's projection for 2005.

Housing Supply and Housing Need

The previous section described supply and demand primarily in quantitative terms. It does not address the fit between the expected housing supply and the expected needs of Fremont residents. Expectations about need are based on assumptions about the future. The following are a few of the assumptions about housing demand and supply that form the basis for the City's policies. Because cities generally rely on private development to meet the housing needs of their residents, the following discussion of supply focuses on what is expected from the private market relative to expected housing needs.

Work Force

In 1990, Fremont is estimated to have 1.74 employed residents for every job in the City. In the next 15 years, ABAG forecasts Fremont will add 22,400 new employed residents and add 39,500 new jobs. Fremont is projected to provide housing for 57 percent of the growth in Fremont's work force. This projected employment growth in excess of housing development will help to rectify past regional imbalances and allow Fremont to balance its large existing housing supply with sufficient near-by employment. An increase in jobs in closer proximity to existing housing will help reduce commuting and the impacts associated with commuting.

Even with this high level of employment growth, Fremont is still projected to have a large surplus of employed residents compared to jobs in 2005. The housing needs of most new workers in Fremont are expected to be met by

turn-over in the current housing stock, new housing in Fremont and housing elsewhere. However, ABAG notes that Bay Area cities are not now planning for sufficient residential development to accommodate potential regional employment growth. An overall lack of residential development could have a significant impact on the region's and Fremont's ability to attract new employment. Fremont may therefore wish to examine the potential to convert land to residential use, as discussed previously. However, conversion must be consistent with industrial uses existing and planned. New housing development should also be consistent with other goals and objectives regarding protection of open space and environmental resources.

The type of housing planned for Fremont over the next fifteen years mirrors expected need, with almost three-quarters of the City's residential development potential planned for multi-family housing. Moderate and higher density housing is likely to be more affordable for the moderate and lower income households who will be the majority of expected new workers. The housing needs of high-income executives will be met by an increasing supply of luxury housing in Fremont. The large existing supply of good quality single family homes is suitable for those of above-moderate income. The need for affordable housing of some workers earning low incomes and of virtually all very low income workers will not be met by the private market.

Household Type and Size

Fremont will continue to have a predominance of family households. However, demographic trends indicate the proportion of traditional nuclear families will continue to decline. There will be more single parents, more elderly, and more unrelated individuals and other types of households living in Fremont in the future. Projections also indicate a continuing drop in average household size, although at a considerably slower rate than in the past. This slowing in the reduction of household size reflects a national resurgence in the proportion of households with children, as well as the high cost of housing which compels people to live together to afford housing.

The expected growth in the diversity of household types and sizes implies a continuing need for a wide variety of housing. Smaller homes will be needed for individuals, seniors, small families and others. There will also be a continuing demand for larger homes for growing families and others living together. Both of these trends are projected to be accommodated in Fremont. The majority of new housing is projected to be multi-family housing which tends to have unit sizes smaller than single family homes. The existing housing stock of single family homes, and larger new single family homes will help to meet the needs of larger households who can afford to purchase or rent this housing.

Income

A significant increase in the proportion of households who can purchase homes is not expected. The single family detached housing stock will be increasingly occupied by those with relatively high incomes. The cost of for-sale housing means a growing proportion of people will require rental housing of all types and sizes.

ABAG prepares estimates of housing need based on household income. ABAG last prepared these estimates in 1988 for the 1988 through 1995 period. Table 4-6 presents ABAG's estimates of housing need for 1990 -1995 adjusted to reflect development occurring in Fremont in 1988 and 1989. In 1988 and 1989, 3695 building permits for residential units were issued in Fremont, of which an estimated 650 units were for multi-family units. Another 191 units were completed for very low income families, seniors and handicapped households. In Table 4-6, the ABAG projected housing needs have been adjusted assuming that 20 percent of the 650 multi-family units were affordable to low income households, and the remainder were affordable to moderate income households. The very low income figure is adjusted to reflect the 191 units developed. All other housing developed in 1988 and 1989 is assumed to be affordable only for those above moderate income.

The City has sufficient land planned for multi-family housing to meet expected rental housing demand. Assuming sufficient development and no significant change in cost relative to income, rental housing should meet the needs of most low income households. However, the housing needs of very low income households and of larger low income families are not expected to be met by the private market.

Elderly

The proportion of the elderly in Fremont will increase; this trend will accelerate as the baby-boom generation begins to reach retirement age in the year 2010. Some elderly need assistance to remain in their existing homes, others require more communal housing environments (preferably in familiar neighborhoods), many need housing which incorporates health and social services and most require access to transit and services.

Table 4-6
Projected Housing Needs by Income Category*

Income Category	Annual Need (1991)	Five Year Need (1991 - 1995)
Above Moderate	114 units	569 units
Moderate	238 units	1,192 units
Low	219 units	1,093 units
Very Low	320 units	1,602 units
TOTAL	891 units	4,456 units

Source: Association of Bay Area Governments adjusted to reflect 1988 - 1989 development

If sufficient sites are available, the private market is expected to respond to many of these needs for specialized housing, especially for those seniors with above moderate income. However, the potentially high costs of specialized services and the fixed and limited incomes of some seniors suggests the needs of those seniors may not be met by the private market. The needs of senior households will need to be carefully monitored, and sufficient sites planned for housing suitable for seniors throughout the City.

Disabled

While recently adopted construction standards will make new housing more accessible for the disabled, there will be a continuing need to modify existing housing to increase accessibility. The costs of modifying existing homes or rental units may be prohibitive for many disabled people unless public assistance is available.

Families with Children

Families with children often face obstacles which limit their accessibility to rental housing. These obstacles can take the form of arbitrary occupancy limitations which limit the number of people allowed to occupy a given size unit. Lower income families and larger families have the most difficulty finding units because they have less choice and face limited availability of larger rental units.

Emergency Shelter

The emergency housing needs of the homeless, those facing temporary emergencies and abused woman and children can be expected to increase if housing costs continue to increase or if there is a downturn in the economy. The private housing market does not serve the needs of these groups and is not expected to in the future.

Loss of Affordable Housing

As required by State law, the City has reviewed those projects subject to being lost to the supply of housing affordable to low income households due to termination of State, Federal or local programs, contracts or other factors. The City has evaluated projects with potential to be lost over the next five and thirteen years. In total, the City has the potential to lose 341 units over the next five years, and another 614 units over the subsequent eight years, or a total potential loss of 955 units in the next thirteen years. These projects would be lost if project owners choose to leave current contracts ("opt-out") or when existing long-term contracts for affordable housing expire.

Public Policy Implications

The City of Fremont's housing constitutes about three percent of the region's housing stock. Land costs and housing costs are largely determined by regional supply and demand factors beyond the control of local government. Even a significant increase in Fremont's supply of land for housing would make little long-term difference in housing costs.

While City actions will have negligible impacts on regional housing conditions, the City can use its regulatory powers to encourage or require developers to provide the type of housing that more effectively responds to the housing needs of the community. Those powers include land use regulations which help determine the type and density of housing. Cities can also influence development decisions through various incentive and regulatory programs. Some of these are discussed in more detail below.

Residential Land Use Controls

The City of Fremont has sufficient land planned for residential development to meet its share of regional quantitative need for the next five years. The City currently has sufficient development capacity to address almost all of the fifteen year growth projections prepared by ABAG.

Three quarters of the City's residential development potential is for multi-family housing types which respond to the expected needs of future workers, and to the needs of seniors and other households with special needs.

Fremont is entering a new phase of its existence. Rather than building new neighborhoods, much of the new housing built in the next 20 years will need to harmonize with an existing neighborhood context. This does not mean all housing must look like or be the same density as its neighbor. However, neither should new housing disrupt the scale and character of the area in which it is located.

Conservation and maintenance of existing homes and neighborhoods will be as important an issue for Fremont's future as the development of new housing. To avoid future conflict, the City will need to review its existing development standards in order to guide development decisions within existing neighborhoods. The City will also need to carefully monitor the condition of housing.

Housing Programs

Three different time frames for implementation measures are identified, where appropriate:

- Ongoing. These measures are currently being implemented.
- Short-term. These measures are expected to be implemented in the next one to three years. Many will continue after initial implementation for at least the next five years.
- Longer-term. These measures are expected to be implemented sometime in the next five years.

Quantified objectives for implementation measures are identified where appropriate, as required by State law. Quantified objectives, where identified, are for the five years from 1991 through 1996. While those resources are not expected to be sufficient, the City needs to maximize its use of local resources, promote existing incentives and evaluate the potential to expand local resources through various incentives, fees and requirements. The City can also explore regulatory measures to preserve existing housing and promote new housing for those whose needs are not met by the market.

Goals, Objectives, Policies and Implementation

The availability of housing to serve the needs of a diverse population is a critical social and economic concern for the City of Fremont. The City's character and economic health are dependent on maintaining a high quality housing stock for the needs of Fremont residents and workers. The need for housing must also be placed in the context of other concerns of the City: conservation and improvement of existing neighborhoods, maintenance of high standards for new development, protection of environmental resources and creation of a city with a strong employment base.

The following section sets forth the City's plan for meeting housing needs within the broader context of other goals and objectives. It not only addresses the need to expand the housing supply for all economic segments of the population, but sets forth the City's goals and policies with regard to the standards new housing must meet, and identifies how the City intends to maintain the quality of housing in its neighborhoods.

Housing Goals

The following goals present Fremont's vision of its housing future. Overall, the City must strike a balance between the need to provide housing for a growing and diverse work force, and retention of the residential qualities that make Fremont a good place to live.

GOAL H 1: Conservation and Enhancement of Existing Residential Neighborhoods

GOAL H 2: High Quality and Well-Designed New Housing of All Types Throughout the City

GOAL H 3: Housing Affordable and Appropriate for a Variety of Fremont Households at All Economic Levels Throughout the City

GOAL H 4: A Continuing Leadership Role in Regional Efforts to Maintain and Expand the Range of Housing Alternatives in the San Francisco Bay Area

Except where noted, the time frame for all implementation measures is between 1991 through 1995. Quantified objectives for implementation measures are identified where appropriate, as required by State law. While the City will strive to meet quantified objectives, the City's ability to meet many objectives is dependent on the availability of resources, some of which are outside the control of the City. The City will do all it can to seek

necessary resources, but because resources are not committed, quantitative objectives must be considered goals which the City hopes to achieve, rather than firm objectives which it necessarily expects to meet.

In the following section, responsibility for carrying out implementation measures is generally assigned to one or more City departments. This indicates the department(s) expected to take the lead role within City government for carrying out the implementation measure based on direction from the City Council. Ultimate responsibility for approving and directing implementation efforts rests with the City Council.

HOUSING (H) GOAL 1:
Conservation and Enhancement of Existing Residential Neighborhoods

OBJECTIVE H 1.1. A well-maintained housing stock

Policy H 1.1.1: Maintain existing programs and periodically review and modify those programs assisting very low income and low income homeowners and rental property owners to maintain and rehabilitate the existing housing stock.

Implementation 1: Continue use of Community Development Block Grant (CDBG) funds and Housing Rehabilitation and Rental Rehabilitation Programs, including the following:

- Low interest rate home rehabilitation loans;
- Deferred payment rehabilitation loans;
- Grants to homeowners with very low incomes for minor repairs;
- Below market-rate financing to rehabilitate rental units occupied by lower income households;
- Grants to make rental units accessible to the disabled.

Responsibility: Housing Department
Quantitative Objective: 80 loans and 450 minor repair grants
Timeframe: Ongoing

Policy H 1.1.2: Maintain existing programs and periodically review the need for additional programs to encourage a high level of residential maintenance.

Implementation 1: Continue and expand, as necessary, existing neighborhood preservation programs to ensure long-term maintenance of residential quality.

Responsibility: Building and Safety Department, Public Works Department, Community Development Department, Fire Department
Timeframe: Ongoing

Implementation 2: Periodically monitor the condition of housing in neighborhoods, focusing on neighborhoods with a large proportion of homes in excess of thirty years of age.

Responsibility: Community Development Department, Housing Department
Timeframe: Longer-Term

OBJECTIVE H 1.2: Substandard neighborhood conditions upgraded

Policy H 1.2.1: Identify and program the construction of basic neighborhood improvements (e.g., curbs, gutters, sidewalks, street trees) now lacking or substandard.

Implementation 1: In Redevelopment Areas, use a portion of tax increment funds for repair and reconstruction of streets and other neighborhood improvements where such improvements are substandard.

Responsibility: Redevelopment Agency, Community Development Department
Timeframe: Ongoing

Implementation 2: Identify and schedule required neighborhood improvements during the Capital Improvement Project planning process.

Responsibility: Public Works Department, Community Development Department
Timeframe: Ongoing

Implementation 3: Where appropriate, establish improvement districts to finance neighborhood improvements.

Responsibility: Public Works Department, Community Development Department

OBJECTIVE H 1.3: Existing neighborhood conditions maintained or improved

Policy H 1.3.1: Continue to program maintenance and reconstruction of public facilities such as roads, sidewalks, lighting, public landscaping, utilities and others essential to preservation of residential character.

Implementation 1: Identify and schedule required neighborhood improvements during the Capital Improvement Planning process.

Responsibility: Public Works Department

Implementation 2: Periodically review standard maintenance and reconstruction schedules to assure timely maintenance of publicly maintained residential facilities.

Responsibility: Public Works Department

OBJECTIVE H 1.4: A high level of private initiative in maintaining and improving existing neighborhoods and homes

Policy H 1.4.1: Assist private initiatives to maintain and improve neighborhoods and homes.

Implementation 1: Maintain regular contact between City staff and neighborhood associations to review maintenance and development concerns, and assist in private initiatives to improve neighborhood conditions.

Responsibility: Public Works Department, Building and Safety Department, Community Development Department

HOUSING (H) GOAL 2:
High Quality and Well-Designed New Housing of All Types Throughout the City

OBJECTIVE H 2.1: Maintenance of construction standards for housing

Policy H 2.1.1: The City shall continue to apply building codes for new construction to ensure the development of safe, high quality housing.

Implementation 1: Maintain existing building code enforcement efforts in regards to new development and update codes as necessary.

Responsibility: Building and Safety Department, Fire Department, Public Works Department, Community Development Department
Timeframe: Ongoing

Policy H 2.1.2: High quality building materials in the development of new housing.

Implementation 1: Adopt standards for building materials to be used for residential construction.

Responsibility: Community Development, Building and Safety Department, and Fire Department
Timeframe: Short-term

OBJECTIVE H 2.2: Well-designed new housing consistent with the scale and character of existing neighborhoods

Policy H 2.2.1: The City shall review and supplement existing residential development standards to ensure that new development within developed residential areas is consistent with the scale and character of the area.

Implementation 1: Review existing residential development standards and prepare additional or supplemental standards to accomplish the following:

- Establish additional standards for site coverage, height and intensity to govern future infill and neighborhood revitalization;
- Establish site planning and design criteria appropriate to each planning area;
- Determine transitional requirements for parcels adjoining those with differing uses.

Responsibility: Community Development Department
Timeframe: Longer-Term

Implementation 2: Specific Plans, Design Guidelines and other development regulations affecting existing single family residential areas shall include guidelines to assure appropriate transitions between different intensities and types of use, and to assure new residential development does not disrupt the scale and character of existing neighborhoods. Such guidelines will accomplish the following:

- Assure continued access and appropriate levels of service for recreation and other residential services;
- Establish additional standards for site coverage, height and intensity to govern future infill and neighborhood rehabilitation and redevelopment;
- Establish locational criteria for different residential types and densities and determine appropriate residential intensities;
- Establish site planning and design criteria appropriate to each planning area.

Responsibility: Community Development Department
Timeframe: Longer-Term

OBJECTIVE H 2.3: **Below market-rate housing similar in appearance and quality to comparable market-rate housing**

Policy H 2.3.1: City design and development standards shall generally apply to below market-rate housing in Fremont; development standards may be waived only at the discretion of the City Council.

Implementation 1: Below market rate housing shall be subject to standard City review procedures in regards to the application of design and building quality standards.

Responsibility: Community Development Department
Timeframe: Ongoing

Implementation 2: When necessary, seek to supplement Federal and State housing programs to assure below-market housing is generally comparable in appearance and quality to market-rate housing at similar densities in Fremont.

Responsibility: Housing Department
Timeframe: Ongoing

HOUSING (H) GOAL 3:
Housing Affordable and Appropriate for a Variety of Fremont Households at All Economic Levels Throughout the City

OBJECTIVE H 3.1: **The development of 891 housing units annually for the 1990 to 1995 period**

Policy H 3.1.1: Continue to designate sufficient vacant and underutilized land to allow for the development of housing to meet Fremont's share of quantitative regional housing need for the 1990 - 1995 period.

Implementation 1: Periodically review and amend the General Plan diagrams and zoning designations to retain sufficient land to meet projected quantitative need, consistent with other City goals, objectives and policies.

Responsibility: Community Development Department
Timeframe: Ongoing

Implementation 2: Facilitate sufficient housing development by continuing to bi-annually update and make available a vacant lands map identifying vacant residential parcels within the City.

Responsibility: Community Development Department
Timeframe: Ongoing

OBJECTIVE H 3.2: **Housing that meets the needs of new workers in Fremont**

Policy H 3.2.1: Identify and seek to provide sufficient land zoned at appropriate densities to address the needs of new Fremont workers.

Implementation 1: Prepare an annual housing report for the review of the City Council including information on land supply, housing cost relative to identified need and expected

demand, and progress toward meeting housing needs.

Responsibility: Community Development Department, Housing Department
Timeframe: Ongoing

Implementation 2: Consider preparation of guidelines to be used for determining when housing impacts will be evaluated as part of an impact assessment of an industrial or commercial development.

Responsibility: Community Development Department, Housing Department
Timeframe: Longer-Term

Implementation 3: Use Mortgage Credit Certificates, issue tax-exempt mortgage revenue bonds and participate in any other appropriate State and Federal program to finance for-sale housing for first-time moderate income home buyers and support similar programs implemented by Alameda County. Consider use of local funds (e.g., redevelopment funds) to support this program.

Responsibility: Housing Department
Quantified Objective: 400 units
Timeframe: Ongoing

Implementation 4: Consider the establishment of a mortgage equity sharing program for moderate and low income first time homebuyers.

Timeframe: Short-Term

Policy H 3.2.2: Consider expansion of the supply of land available for new housing development to meet the housing needs of an expanding work force. Any proposed conversion of land to residential use from other uses should consider the impact on other city goals such as the maintenance of sufficient industrial and commercial land to provide for a significant increase in employment and protection of environmentally sensitive areas.

Implementation 1: Evaluate the conversion of vacant or underutilized nonresidential land to residential use. In particular the City shall review the following areas:

- Future BART station areas
- Areas surrounding existing community commercial centers
- Adjacent to the Central Business District (in areas not now planned for residential use)

Responsibility: Community Development Department
Timeframe: Ongoing

Implementation 2: Prepare guidelines, identify appropriate locations and modify zoning to permit mixed use (residential with retail and/or office use) development. Areas to be considered are in and adjacent to existing community commercial centers and the CBD area.

Responsibility: Community Development Department
Timeframe: Short-Term

OBJECTIVE H 3.3: A range of housing by type, size and cost throughout the City

Policy H 3.3.1: Encourage the development of a diverse housing stock by type, size and cost that will address expected housing needs.

Implementation 1: Assess the need for regulations or incentives to encourage the development of smaller single family housing units.

Responsibility: Community Development Department, Housing Department
Timeframe: Short-Term

Implementation 2: Monitor and evaluate Community Reinvestment Act information to identify any underserved areas or groups in the community. If deficiencies are identified, communicate them to local lending institutions.

Responsibility: Housing Department
Timeframe: Short-Term

Policy H 3.3.2: Require that multi-family housing (with the exception of housing designed exclusively for seniors) be designed to accommodate the needs of families and children (note: State law requires multi-family housing, except housing for seniors, be available to households with children).

Implementation 1: Develop a policy encouraging or requiring multi-family housing developments to include a percentage of units with three or more bedrooms.

Responsibility: Community Development Department, Housing Department
Timeframe: Short-Term

Implementation 2: Modify the zoning code to require appropriate amenities for children in the design of outdoor areas in multi-family housing.

Responsibility: Community Development Department
Timeframe: Short-Term

Policy H 3.3.3: Preserve the existing availability and affordability of mobile home sites.

Implementation 1: Reevaluate the mobile home space rent stabilization and conversion ordinance prior to its sunset in February, 1992. Monitor compliance with the existing ordinance.

Responsibility: Housing Department

Policy H 3.3.4: The City shall, in accordance with other City goals and objectives, continue to provide for adequate sites for a range of housing types.

Implementation 1: Conduct a periodic review and, when appropriate, amend the General Plan diagrams and zoning designations to accommodate a variety of housing types consistent with other City goals, objectives and policies.

Responsibility: Community Development Department

Policy H 3.3.5: Maintain and/or adopt appropriate land use regulations and other development tools to encourage the development of housing affordable to those of very low and low income throughout the City.

Quantified Objective: Through the following and other land use implementation measures, the City expects to encourage development by the private market of housing affordable to low and moderate income households. The quantified objective for 1990 - 1995 is 1,093 units affordable to low income households and 1,192 units affordable to moderate income households. It is anticipated the private market will meet the need for 700 low income units, and all moderate income units without direct subsidy, although some households or units may receive indirect subsidies such as density bonuses and mortgage revenue bonds.

Implementation 1: Modify the density bonus provisions of Fremont's zoning code to be consistent with State law (see Land Use Element for further discussion).

Responsibility: Housing Department, Community Development Department
Timeframe: Short-Term

Implementation 2: Promote to the development community the use of the density bonus provisions for low and moderate income housing.

Responsibility: Housing Department and Community Development Department
Timeframe: Ongoing

Implementation 3: Consider the provision of housing affordable to low and moderate income households as an important benefit to the City in assessing the appropriateness of granting discretionary land use approvals, including planned districts, development agreements, zoning modification requests, and General Plan amendments.

Responsibility: Community Development Department, Housing Department

Policy H 3.3.6: Residential development within the Fremont Industrial Redevelopment Project area shall be undertaken in compliance with the requirements of the California Community Redevelopment Law for provision of dwelling units available at affordable housing cost to very low, low and moderate income households.

Implementation 1: Developers in the Fremont Industrial Redevelopment Project area may be required, as a condition of development, to enter into agreements in a form acceptable to the Fremont Redevelopment Agency and the City to ensue compliance.

Responsibility: Redevelopment Agency
Timeframe: Short-Term

OBJECTIVE H 3.4: Assist the development of 393 housing units for low income households, and 1602 housing units for very low income households between 1990 and 1995

Policy H 3.4.1: The City shall use all available State, Federal and local programs to facilitate the development and preservation of housing affordable for very low and low income households whose housing needs are not met by the private market.

Quantified Objective: Because the City combines financial resources in the development of affordable housing, quantified objectives for each implementation measure and/or revenue source and program are not appropriate. Overall, the City intends to focus its funding resources on meeting the needs of very low income households and those special households whose needs are not met by the private market. The City also intends to leverage financing programs to provide for the needs of low and very low income households. Overall, for the direct funding programs (non-regulatory) described below, the City's objective is to assist in the development of 1,602 very low income rental units, and 393 low income rental units between 1990 and 1995.

Implementation 1: Cooperate with and assist housing development entities building housing and in other ways providing housing reserved for and affordable to low income households.

Responsibility: Housing Department and Community Development Department
Timeframe: Ongoing

Implementation 2: Review existing fee and fee-subsidy structure to identify if it is possible to further reduce the burden of fees on development in exchange for below market-rate housing.

Responsibility: Community Development Department, Finance Department
Timeframe: Short-Term

Implementation 3: Continue to give priority in the development review process to housing developments which include below market-rate units.

Responsibility: Community Development Department, Public Works Department
Timeframe: Ongoing

Implementation 4: Review property found surplus by the Fremont Unified School District or other public agencies to determine whether it can be purchased by the City or Redevelopment Agency for land-banking and conveyance for assisted residential development.

Responsibility: Community Development Department, Housing Department
Timeframe: Ongoing

Implementation 6: Encourage private sector financial institutions to establish below market-rate housing finance programs.

Responsibility: Housing Department
Timeframe: Short-Term

Implementation 7: Issue revenue bonds, use tax increments from redevelopment areas and Community Development Block Grant funds to finance multifamily projects including units for very low income households and households with special needs such as families with children, the elderly, disabled and homeless. Monitor assisted developments to ensure compliance with program requirements.

Responsibility: Housing Department
Timeframe: Ongoing

Implementation 8: Encourage and facilitate the use of State and Federal tax credits and other subsidy and financing mechanisms to assist the development of housing affordable to very low income households.

Responsibility: Housing Department
Timeframe: Ongoing

Implementation 9: Continue to identify and seek to acquire new State and Federal housing resources as they become available to meet identified housing needs.

Responsibility: Housing Department
Timeframe: Ongoing

Implementation 10: Monitor and encourage State and Federal efforts to ensure retention of the existing stock of units subsidized by Federal programs. Evaluate the feasibility of allocating local resources or adopting local protective measures to preserve these units and prevent displacement of very low income elderly and family households if State and Federal agencies fail to act in a timely manner.

Responsibility: Housing Department
Timeframe: Ongoing

Implementation 11: Continue contracting with the Alameda County Housing Authority to administer Federal rental assistance programs in Fremont. Support applications to the Federal Government by the Authority to increase rental assistance in Fremont.

Responsibility: Housing Department
Quantified Objective: An increase of 250 units
Timeframe: Ongoing

Implementation 12: Support and facilitate applications for Federal project-based rental assistance programs (Section 202, Section 8, etc.).

Responsibility: Housing Department
Quantified Objective: Apply for 250 units
Timeframe: Ongoing

Implementation 13: Continue to support the issuance of general obligation bonds by Alameda County to finance the development of new rental housing for elderly and disabled persons throughout the County.

Responsibility: Housing Department

Implementation 14: Support through resolution and other appropriate means, the continuation of Federal, State funding and/or programs which assist in the development of housing for low and very low income households and meet emergency shelter needs.

Responsibility: Housing Department

Policy H 3.4.2: The City shall seek to establish a continuing and reliable source of funds to develop and preserve housing for very low and low income households.

Implementation 1: Continue to allocate an appropriate portion of the annual Community Development Block Grant entitlement grant to acquire sites and facilitate the development of housing affordable to very low and low income households.

Responsibility: Housing Department
Timeframe: Ongoing

Implementation 2: Continue to allocate required proportion of tax-increment funds generated by redevelopment projects and federal home funds to assist units to meeting the proportionate housing needs of population segments based on the following five year allocation plan:

14% for elderly/disabled households
69% for small families
17% for large families

Responsibility: Redevelopment Agency, Housing Department, Community Development Department
Timeframe: Ongoing

Implementation 3: Develop rules and procedures to require new multi-family housing developments to include below market-rate units, or to pay fees in lieu of such development.

Responsibility: Housing Department, Community Development Department
Timeframe: Short-Term

Policy H 3.4.3: Maintain the affordability of assisted housing.

Implementation 1: Continue to enter into binding contractual or other agreements that maximize the length of time (a minimum of 30 years is desirable) which an assisted housing unit remains affordable to low or very low income households.

Responsibility: Housing Department

Implementation 2: Continue to enter into binding contractual or other agreements that keep assisted housing at below-market rates as long as possible.

Responsibility: Housing Department

Policy H 3.4.4: Facilitate preservation of the affordability of existing below market rate and subsidized rental units for lower income households.

Implementation 1: Monitor and comment, when appropriate, on the U.S. Department of Housing and Urban Development (HUD) process for conserving subsidized housing where that process is used in Fremont. Seek to preserve affordability of units at risk of losing use restrictions through comments, negotiations and by providing information and assistance where feasible.

Responsibility: Housing Department
Quantified Objective: Preservation of 132 very low income units by 1993
Timeframe: Short-Term

Implementation 2: Actively encourage HUD to offer new Section 8 contracts where appropriate when existing project-based contracts expire to prevent the displacement of very low income tenants. If contracts are not renewed, consider providing assistance to a nonprofit or other public purpose entity to preserve the affordable below market rate units through purchase.

Responsibility: Housing Department
Quantified Objective: Maintenance of 38 very low income units by 2000
Timeframe: Very long-term

Implementation 3: Encourage owners of housing financed with mortgage revenue bonds whose agreements are expiring by the year 2000 to voluntarily retain some below market rate units and accept Section 8 vouchers or certificates on a priority basis when renting these units. Consider issuing a current refunding of the bond financing to extend the regulatory term for the below market rate units. Focus efforts on projects with rents affordable to households below 70% of median income.

Responsibility: Housing Department
Quantified Objective: Maintenance of 111 low income units by 1995
Timeframe: Longer-Term

Implementation 4: Assist tenants who cannot afford market rents to find housing when currently assisted housing is converted to market-rate.

Responsibility: Housing Department
Timeframe: Short-Term

OBJECTIVE H 3.5: Housing that is adaptable and accessible to the disabled

Policy H 3.5.1: Adopt policies and programs to increase the amount of housing accessible to the disabled.

Implementation 1: As funding resources permit, allocate a portion of Community Development Block Grant funds to make rental units accessible to the disabled as a component of the City's Housing Rehabilitation Program.

Responsibility: Housing Department
Quantified Objective: 10 units
Timeframe: Ongoing

Implementation 2: Continue to provide below market-rate and deferred payment loans to lower income homeowners for accessibility

improvements to their homes, as funding resources permit.

Responsibility: Housing Department
Quantified Objective: 15 units
Timeframe: Ongoing

Implementation 3: Implement and aggressively apply the Building Code and State, Federal and local requirements which ensure new housing is accessible to the disabled.

Responsibility: Public Works Department, Community Development Department, Building and Safety Department
Timeframe: Ongoing

OBJECTIVE H 3.6: A range of housing services to meet the needs of households with special needs within the City, including the homeless, families with children, and those of low and very low income

Policy H 3.6.1: Continue services that increase housing accessibility and cooperative landlord/tenant relations.

Implementation 1: Continue existing housing assistance services including the following:

- Landlord/tenant counseling and mediation assistance;
- Home seeker assistance services

Responsibility: Housing Department
Quantified Objective: Assist 7,720 households
Timeframe: Ongoing

Policy H 3.6.2: Assist in meeting the needs of the homeless and those who have emergency housing needs in Fremont.

Implementation 1: Establish emergency shelter capabilities in cooperation with the Tri-City Homeless Coalition.

Responsibility: Housing Department, Public Works Department
Quantitative Objective: Space for 60 - 100 people nightly
Timeframe: Short-Term

Implementation 2: Periodically assess the need for emergency shelter and identify ways to address this need with permanent or temporary shelters, as funds are available.

Responsibility: Housing Department, Human Services Department
Timeframe: Ongoing

Implementation 3: Support and assist the efforts of organizations which provide shelter and services to the homeless.

Responsibility: Housing Department, Human Services Department
Timeframe: Ongoing

OBJECTIVE H 3.7: Continue to Address illegal discriminatory housing policies and practices

Policy H 3.7.1: Support activities that enforce all City, state and federal laws which address illegal discriminatory housing policies and practices.

Implementation 1: Continue to provide housing discrimination investigation and referral services funded by Community Development Block Grant program.

Responsibility: Housing Department
Timeframe: Ongoing

GOAL H 4:
A continuing leadership role in regional efforts to maintain and expand the range of housing alternatives in the San Francisco Bay Area

OBJECTIVE H 4.1: An example and leader in meeting local housing needs

Policy H 4.1.1: Promote workable local programs to meet housing needs.

Implementation 1: Work cooperatively with adjoining and regional agencies in formulating and implementing strategies for the development and preservation of housing for all income levels.

Responsibility: Housing
Timeframe: Ongoing

Implementation 2: Share Fremont's experience and programs in regional and State forums.

Responsibility: Housing
Timeframe: Ongoing

Policy H 4.1.2: Advocate for local governments to take responsibility for the housing needs generated in their jurisdiction, and for programs which promote local cooperation in achieving jobs/housing balance.

Implementation 1: Work in regional commissions, boards and other bodies to establish procedures and programs to implement the above policy.

Chapter 5
The Local Economy

INTRODUCTION

From its incorporation, Fremont planned for a strong economy with a diversified employment base in manufacturing, office, wholesale and retail uses. This economic base would provide job opportunities and a range of retail goods for residents and the subregion, thus ensuring a strong tax base necessary for providing services. The City has achieved many of its original objectives, a healthy economy, which includes a strong employment base, a healthy retail sector and a solid tax base. These factors continue to be important to the future of Fremont. This Chapter of the Fremont General Plan sets forth Fremont's strategy for achieving this goal.

This Chapter is divided into three sections:

- Setting. A description of existing economic conditions within the City.
- Projections. Expectations and projections regarding the future that form the base for the City's economic strategy.
- Goals, objectives, policies and implementation measures: the strategy the City will follow to achieve a healthy economic environment.

SETTING

Fremont has a healthy and diversified economy which includes high technology manufacturing and development, as well as the more traditional manufacturing, warehousing and distribution uses. Historically, Fremont's economy has been shaped by its place in the Bay region. In the 1960s, Fremont's 5,400 acres of industrial land attracted an auto assembly plant. The former General Motors plant, now known as New United Motors Manufacturing Inc. (NUMMI), continues to be the largest private employer in Fremont. However, the slow growth of other traditional industries in the Bay Area (and nation-wide) left much of Fremont's industrial land supply vacant until the early 1980s when a new type of industry arrived.

The 1970s marked the beginning of Silicon Valley in Santa Clara County, across the Bay from Fremont. The unexpected and rapid growth of high technology industries in the cities surrounding Stanford University far out-stripped the ability - or desire - of many of those communities to absorb new housing for the employees in those industries. The resulting housing

demand spilled into the East Bay, and in particular into Fremont. Fremont's residential land was rapidly developed and fed commuters to Silicon Valley.

Until the 1980s, the majority of Fremont's employment growth was in businesses providing goods and services to a rapidly increasing residential population. Then, office-based industries spread out of San Francisco and Oakland. At the same time, Silicon Valley industries spread out of the confined and congested areas of the West Bay. Fremont benefitted from both of these trends.

Branch offices located in Fremont's Central Business District, and warehousing moved to Fremont's industrial areas. Fremont's proximity to Silicon Valley attracted a growing number of high technology firms. A 1988 survey found Fremont to be the fastest growing area for the location of high technology firms due to the City's workforce, available sites, new infrastructure and the City government's encouragement of business. Fremont's prime location and available land supply have also attracted distribution and warehouses servicing much of the Bay Area. The city now holds some 25 million square feet of developed space in its industrial areas. With the exception of the vehicle assembly plant (NUMMI), Fremont's major employers are predominantly manufacturers of computer-related electronics.

Jobs

Employment growth in Fremont reflects the patterns of economic development described above. Until 1980, the vast majority of Fremont's employment was in non-manufacturing businesses providing goods and services to the people who lived here. Beginning in 1980 Fremont grew from an estimated 33,710 jobs to 56,800 in 1990 (Table 5-1), with strong growth in the manufacturing and wholesaling sectors. Fremont's proximity to the manufacturing boom occurring in Silicon Valley, the availability of vacant land and good housing values relative to other parts of the Bay Area explain much of this growth.

The service sector has also grown since 1980, although at a slower pace than manufacturing. Fremont has attracted several office developments to its Central Business District. The retail sector has also grown steadily, reflecting the growth in population.

Table 5-1
1980 - 1990 Employment in Fremont

	1980	1990	1980-1990 Change	1980-90 % Change
TOTAL EMPLOYMENT	33,710	55,870	22,160	+ 66%
MFG/WHOLESALE	3,930	11,760	7,830	+ 200%
RETAIL	8,490	14,200	5,710	+ 67%
SERVICES	11,870	17,030	5,160	+ 43%
OTHER	8,290	12,010	3,720	+ 45%
AG/MINING	1,140	870	(270)	- 24%

Source: ABAG, Projections '90

As with any city in the Bay Area, not everyone living in Fremont takes a job here, nor can jobs be reserved for people who live here. As foreseen years ago, the benefits of working close to home are appreciated more today as a greater number of household members work and as workers spend more time commuting. Working close to home reduces commuting time and the frustrations of congestion, which increases the quality of life of residents. The increasing proportion of two-working parent households also increases the importance of jobs close to home and to children. An additional benefit of working close to home is increased community identification and involvement.

Although statistics are not available for Fremont alone, the 1980 census found that a large proportion -- over 60 percent -- of all Tri-City (Newark, Union City and Fremont) jobs were taken by Tri-City residents. However, because there are considerably more workers living in the Tri-City area than jobs, almost two thirds of Tri-City workers commuted to jobs outside the Tri-City area.

Retail Goods and Services

Fremont was planned to provide a wide variety of retail goods and services for the convenience of its residents. Commercial sales within the City are also important because retail sales tax is a critical source of revenue for the City (see following section).

The average Fremont household has an income 23% higher than for the County as a whole, and 6.7% higher than for the region. A higher average income implies that, on the average, there is more disposable income in Fremont available for commercial goods and services than most other communities of comparable size.

To meet the demand for commercial goods and to provide services, Fremont's commercial land uses are laid out in a hierarchy with smaller neighborhood shopping areas located to be convenient to most neighborhoods, and larger commercial centers providing a wider array of goods in an active, identifiable commercial heart to each of the City's district areas. Finally, a single major shopping and business center has developed in the geographic center of the City with offices, entertainment and governmental facilities. Each element of this hierarchy is described below.

Neighborhood Shopping Areas

Neighborhood shopping areas provide products and services to residents of the immediate neighborhood. They typically include grocery stores, dry cleaners, liquor stores, and video rental stores. By minimizing travel distance between home and shopping, neighborhood shopping areas provide convenient access to frequently needed goods and discourage citywide traffic congestion. Neighborhood centers are generally planned to be of a size and location to provide the number and type of services that are needed by

Other Commercial Areas

In addition to the hierarchy of commercial areas, there are several other types of commercial areas in Fremont meeting specialized purposes. These include the following:

- *High Volume Retail.* What is referred to in this plan as "High Volume Retail" uses have developed at Stevenson Boulevard and Albrae Avenue. This retail use has two common characteristics: large size warehouse-type floor areas and bulky goods. The high volume retail center has no vacancies and there have been applications to expand it. Significant expansion of the existing area is infeasible due to the inability to mitigate projected traffic volumes. This area has been successful in part because of its close proximity to the freeway and its close proximity to neighboring retail areas in Newark.

- *Thoroughfare Commercial.* This use is oriented toward through-traffic and includes gas stations and restaurants serving the traveling public.

- *Retail and Commercial Services in Industrial area.* Commercial services and retail stores provide necessary services to industrial businesses and their workers. The proximity of these businesses minimize travel and congestion.

Industry

Fremont's location, growing work force and large supply of vacant land reserved for industry have helped to attract major industries to Fremont. As shown in Table 5.1, employment in Fremont's manufacturing and wholesale sector has grown by an estimated 200 percent between 1980 and 1990, with almost 8,000 jobs added during the decade. This growth is three times faster than any other sector in the City's economy. While NUMMI is the largest industrial facility in Fremont, the City has also attracted many large high-tech firms including Apple, NEXT and Everex computer manufacturing, among others. In the real estate business, Fremont is considered part of what is now called the Silicon Valley Crescent, extending from Fremont, through San Jose and around the Bay to Sunnyvale and Palo Alto. Of those cities, Fremont has the largest supply of readily developable land at prices somewhat below those found in other parts of the Silicon Valley area.

Fremont's central location in the region has also attracted major warehouse facilities to its industrial area, including a major state-of-the-art facility for the Nestle Corporation, among others.

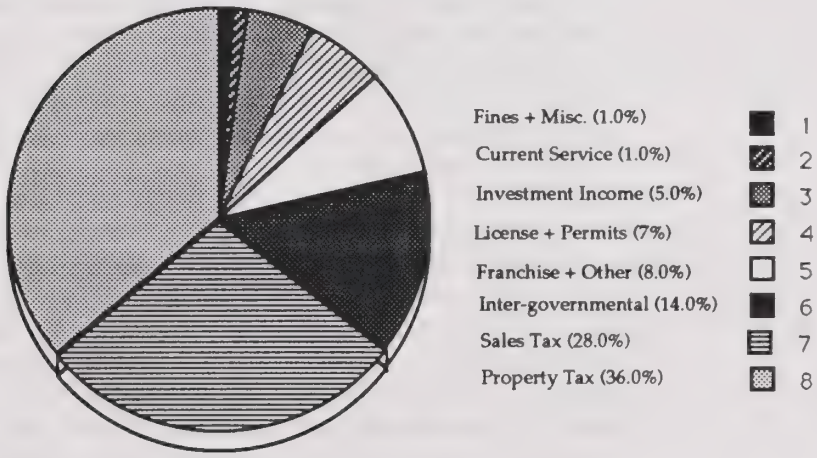
Revenue

The City must maintain adequate revenue sources if it is to provide a satisfactory level of service to its residents and businesses. The sales tax, which is levied on the sale of retail goods, is a major sources of revenue for cities. For the 1990-91 fiscal year, projected Fremont sales taxes account for

approximately 28% of total general revenues, second only to property taxes (36%) (Figure 5-1).

Property taxes are also an important source of revenue. However, while new development may create new property taxes, it also generates new service costs to the City which offset those revenues. Sales tax, by contrast, does not generally generate additional service costs. Absent sale of property (when it is reassessed) the annual increase in property taxes is limited by State law and does not keep up with the rate of inflation. Sales tax revenues, on the other hand, increase as inflation increases because they are directly proportionate to rising prices. Retail space can generate sales tax revenues many times greater than the property tax on the commercial space.

Figure 5-1
Revenue Source by Type for Fiscal Year 89-90 General Revenue



Data Source: City of Fremont Finance Department Estimates, 5/22/90

General Revenues are financial resources used for general government operations. Unlike "user tax" revenue sources such as state gas tax, general revenue sources uses are not restricted.

Inter-governmental taxes include State Cigarette Tax, State Grant for Police Training, etc. Franchise and other taxes include Hotel Tax, Garbage Franchise Tax, etc. Licenses and Permits include Business License tax, Animal License, etc. Current service taxes include Street Maintenance Fees, Hazardous Fees, etc. Fines and Miscellaneous fees such as: General Court Fees, Sale of Equipment.

Although the proportion of Fremont's sales revenues to total revenues is higher than the Bay Area average, a recent study indicates that Fremont's retail sales and, hence, sales revenues fall far short of their potential. The study found that, despite a strong consumer base, taxable retail sales were less than the level that could be supported by the City's population base. This means that Fremont residents were purchasing goods and contributing sales taxes outside the City. The bulk of the outflow of consumer support was in three categories: general merchandise, "other retail" and apparel. However, in auto sales and food stores, Fremont attracted consumer support from other areas, above and beyond the support of the Fremont population.

The City has taken several actions to increase sales revenue by retaining business and encouraging the expansion of business. In 1987, the City modified land use regulations to permit the development of a high volume retail center at Stevenson and Albrae. Recently the City has been instrumental in the retention and expansion of auto dealerships through the development of an automall at Durham Road and I-880. The City has also facilitated the expansion of the NUMMI factory.

PROJECTIONS

As in the past, Fremont's economic future is largely dependent on the strength and direction of the Bay Area's economy.

Fremont continues to have a large supply of vacant industrial land (some 2,700 acres). Fremont's proximity to Silicon Valley continues to make it a good candidate for growing industries seeking room to expand. It is expected Fremont will continue to benefit from growth in the electronics and other high tech industries.

Large unsubdivided industrial parcels may help the City attract major industrial users in the future.

In regards to regional commercial growth, the location of Fremont's CBD adjacent to a BART line and transit hub makes it a good candidate for businesses seeking a convenient location for major office expansion outside of existing congested and high-cost downtown commercial areas. As Fremont's population grows, as the Bay Area economy expands, and as traffic congestion increases, more people will need to use BART and transit. The planned extension of BART to San Jose, and perhaps around the Bay, will enhance Fremont's CBD as a high intensity commercial location.

In general, Fremont is well positioned to take advantage of whatever growth occurs in existing industries, or to capture new industries as they seek places to locate in the Bay Area.

Jobs

The Association of Bay Area Governments projects strong employment growth for the Bay Area and for Fremont (Table 5-2). ABAG projects industrial development to more than double in the next fifteen years, a higher rate of growth than the County as a whole. Manufacturing employment will continue to experience the greatest rate of growth owing to expected continued growth in high tech industries. Retail and services will also continue to expand.

Table 5-2
Fremont Job Projections by Sector

	1990	2005	1990-2005 Change	Percentage Change
Total Employment	55,870	95,400	+39,530	+ 71%
Mfg/Wholesale	11,760	28,610	+16,850	+143%
Retail	14,200	21,080	+ 6,880	+ 48%
Services	17,030	25,820	+ 8,790	+ 52%
Other	12,010	19,400	+ 7,390	+ 62%
Ag/Mining	870	490	- 380	- 44%

Source: ABAG Projection's 90

ABAG also projects the disparity between the number of workers who live in Fremont and the number of jobs here to diminish. Between 1990 and 2005 the number of jobs is expected to double while the growth in Fremont's workforce is expected to slow. By 2005, the current imbalance of workers to jobs is projected to decrease from 1.74 to 1.24 workers for every job in Fremont.

ABAG strongly cautions that the magnitude of future economic growth may be curtailed by high regional housing costs and traffic congestion. Bay Area housing costs are considerably higher than elsewhere in the State and nation. Assuming a continuing differential, the Bay Area as a whole will have difficulty competing for certain types of industries, and especially those with a high proportion of lower paid workers, especially some service and manufacturing industries. As is discussed in the Housing Chapter, Fremont is planning for housing that meets the needs of future workers. Over three quarters of Fremont's future housing stock will be in multi-family housing styles (apartments, condominiums and townhouses) which are more affordable to the majority of new workers.

Most new single family homes will be affordable only to those with relatively high incomes. While such homes will meet the needs of executives and other higher income workers, promotion of all types of housing will be critical to ensure a diversity of housing types to meet the needs of Fremont workers.

Retail Goods and Services

The City's population will continue to increase at a rate exceeding that of the region for at least the next ten years, although slower than the City's growth rates of the past twenty years. Increases in population suggest a continuing increase in the demand for goods and services.

Over the next 15 years, the differential between the average income of a Fremont household and that of the rest of Alameda County and region is projected to increase slightly (see Table 5-3). A higher average income

implies a possible shift in the consumption patterns of households as a higher proportion of Fremont residents seek luxury goods and specialized services, many of which are not readily available in Fremont today. Expected increases in traffic congestion on the regional transportation network will also increase the demand for local goods and services.

Table 5-3
Mean Household Income

	1990	2005
Fremont	$49,300	$58,000
Alameda County	$40,100	$46,900
Bay Area	$46,200	$53,900

Source: ABAG "Projections 90"

Neighborhood and Community Commercial Areas

With the exception of three areas in the City, there seems to be sufficient neighborhood shopping areas to satisfy the expected limited growth in neighborhood shopping needs. Additional neighborhood shopping areas may be needed in the Warm Springs area, in Mission San Jose, and perhaps in Niles.

Fremont's existing community commercial centers have sufficient vacant and underutilized land to meet a significant amount of the increase in demand for goods and services not met by neighborhood shopping centers.

Revitalization and redevelopment of older areas is a more expensive and difficult process than developing a new center from the ground up. As a result, despite opportunities for new development in the existing community commercial centers, there will be continuing demand to expand the land devoted to all types of commercial use. However, increases in the supply of land devoted to commercial use will tend to sap the vitality of existing commercial centers and limit the potential for new investment in them.

Historic, pedestrian-oriented shopping areas elsewhere in the State and country are becoming increasingly popular as shoppers become disenchanted with the blandness of shopping malls and seek to combine shopping activities with other leisure activities. Many historic shopping areas have been able to compete with newer shopping areas because they offer a unique and pleasant shopping environment. Achieving a prosperous historic shopping area often requires considerable public and private investment. Successful historic commercial areas tend to have the following ingredients in common:

- a focused commercial area
- continuous pedestrian frontage
- comfortable outdoor areas for social gatherings

- conformance to an overall design scheme
- convenient but unobtrusive parking areas
- preserved historic buildings
- small- scale structures
- good access and visibility

Fremont's historic commercial centers have many of the ingredients necessary for success. Assistance may be needed in ensuring that the other ingredients are present, such as appropriate parking facilities and pedestrian amenities. In addition, the City will need to ensure that newer buildings complement existing historic character, and reinforce the pedestrian orientation and scale of historic areas. An overall plan for each historic area would assist in coordinating uses, maintenance and design, helping each to achieve its potential as a pedestrian-oriented community center. Fremont's historic community centers could provide a wide range of stores and goods within walking distance, and become a destination for people who enjoy shopping as a form of recreation and entertainment.

Fremont's more recently developed community commercial centers in Warm Springs and at Mowry/Blacow would also benefit from a stronger design theme and better pedestrian connections between shopping areas. Over time, a wider mix and higher intensity of use (such as more office and service uses) might assist these areas to become stronger community focuses rather than larger-than-average neighborhood shopping centers.

While projects within Newark have tried to capture the demand for convenience goods generated by the Northern Plain area, and especially Ardenwood, the Newark shopping areas do not provide the mix of goods and services envisioned for the Northern Plain community commercial center. A high quality, pedestrian-oriented mixed use (office/retail) center in this area could be an attractive alternative for workers and residents in the Northern Plain area.

Central Business District

Fremont's Central Business District is becoming the kind of regional office center originally envisioned. Office development is supplemented by growth in medical offices and uses, and governmental offices. These office uses generate their own retail market in the CBD, including restaurants, specialty retail stores, various services and other uses. The downtown once envisioned is beginning to blossom. However, the full achievement of a "downtown" is still a long-term prospect for the CBD. Achieving a downtown will require public actions to encourage and guide private development, and the provision of incentives and public amenities to continue to attract office development to Fremont.

Other Commercial Areas

High Volume Commercial. There is a perceived need for additional high volume commercial uses in Fremont. However significant expansion of the existing high volume retail area is limited by road capacity. Therefore, to expand the number of high volume retail businesses, other sites with lesser traffic impacts need to be identified and designated. The Land Use Chapter of this General Plan discusses criteria for locating such centers.

Industrial Area Commercial. As industrial development increases there will be a greater need for services supporting industries and their workers. Because of the large amount of vacant land, commercial uses are unlikely to usurp land needed for industrial development so long as commercial service businesses in industrial areas are focused on serving industry and its employees.

Industry

Fremont's large supply of available vacant industrial land is projected to continue to attract industrial development at a considerably faster rate than other types of business in the City. As shown in Table 5-2, Manufacturing/ Wholesale employment is projected to grow by 143% from 11,760 jobs in 1990 to 28,610 in 2005. Much of this growth is expected in high-tech industries which want to be part of the Silicon Crescent area. Despite the high costs of living in this region, many of these businesses need to partake of the synergistic environment and supply of trained workers which is available here and critical to those businesses which want to stay on the cutting edge of this fast changing industry. Important for this industry will be maintenance of the high quality of life in this region which attracts and retains a highly trained labor force.

Fremont's role as a major distribution center for the Bay Area is also expected to grow due to its central location and convenient access to all of the Bay Area as well as the Central Valley. Critical to this growth will be improvements to the existing freeway network and good access to the City's industrial areas from the Dumbarton Bridge and the two major freeways, I-680 and I-880. Warehousing businesses also tend to use a great deal of land area per employee. Maintenance of a supply of relatively affordable land will therefore be an important concern for this industry.

Significant expansion of more traditional industries such as NUMMI is not anticipated in the Bay Area or in Fremont. However, retention (and future expansion) of NUMMI and other industries which have potential for impacts on neighbors (including noise and odors) may depend on maintaining some separation between industry and residential areas. Environmental regulations have tended to reduce the impacts of all types of industry; but many industrial users prefer to avoid the complaints and controversy which sometimes arises when industry is near homes.

Revenue

As new residential development decreases, past increases in revenues to the City from development (property tax and fees) will also decrease. Over time, as the City's infrastructure ages, the City's roads, trails, public buildings and parks will all need increased maintenance and demand an increasing share of the City's annual budget.

The City will continue to require healthy sales tax revenue to meet growing service needs. Increased revenue from sales taxes will depend on continuing City efforts to maintain and capture retail business. Efforts to revitalize existing commercial centers and to expand their attractiveness for consumers will ultimately assist the City to generate sales tax revenue. Fremont has resources in its historic commercial centers that are unique in the Bay area. Healthy, pedestrian-oriented commercial centers could attract people from throughout the sub-region to Fremont. Fremont also has a large, underutilized land resource in its CBD which can ultimately generate significantly increased sales tax revenue.

Goals, Objectives, Policies and Implementation

Fundamental Goals

The City's **Fundamental Goals** include several related to the City's economy. The following seem particularly relevant:

F 5: **A VIBRANT, WELL DEFINED, VISUALLY DISTINCTIVE CENTRAL BUSINESS DISTRICT AS THE FOCUS OF THE CITY'S GOVERNMENTAL, CULTURAL AND COMMERCIAL ACTIVITY**

F 6: **A UNIFIED CITY WITH THRIVING DISTRICTS AND EMERGING COMMUNITIES, EACH WITH ITS OWN IDENTITY**

F 8: **A DIVERSITY OF RESIDENTIAL, RECREATIONAL, CULTURAL, EMPLOYMENT AND SHOPPING OPPORTUNITIES**

F 9: **A LARGE, DIVERSIFIED INDUSTRIAL AND COMMERCIAL BASE TO MEET THE EMPLOYMENT NEEDS OF THE CITY'S PRESENT AND FUTURE WORKFORCE**

F 10: **PUBLIC SERVICES RESPONSIBLY MANAGED AND EQUITABLY DISTRIBUTED THROUGHOUT THE CITY**

Local Economy Goals

Translated into economic terms, the Fundamental Goals lead to the following three **Local Economy Goals**:

GOAL LE 1: **Increased job opportunities in Fremont for Fremont residents**

GOAL LE 2: **A strong municipal tax base**

GOAL LE 3: **A hierarchy of well-defined, vital commercial areas meeting the retail shopping, entertainment and service needs of Fremont residents**

GOAL LE 4: **A diversified industrial employment base to meet the employment needs of the City's present and future workforce.**

The strategy for achieving these goals is found in the following objectives, policies and implementation measures.

LOCAL ECONOMY (LE) GOAL 1: Increased job opportunities in Fremont for Fremont residents

OBJECTIVE LE 1.1: **A significant increase in businesses providing job opportunities for Fremont workers.**

Policy LE 1.1.1: Attract new and retain existing commercial and industrial businesses.

Implementation 1: Develop an economic development strategy for commercial and industrial development. Such a strategy should focus not only on attracting new development but on facilitating the growth of existing local businesses and industries. The plan should assess the existing and projected characteristics of the Fremont workforce, and recommend possible incentives for businesses most likely to provide a high proportion of jobs meeting the needs of Fremont workers.

Policy LE 1.1.2: Consider the City's long term ability to accommodate jobs for existing and future residents prior to approving a conversion of land designated for industrial use to another use.

Implementation 1: Assess proposals for conversion of industrial land to alternative uses for their impact on the City's long term ability to accommodate employment.

Policy LE 1.1.3: Prepare revitalization and development plans for the community commercial centers consistent with preservation of their current scale and character.

Implementation 1: Each plan should include an evaluation of possible City actions that could foster and encourage economic development. Such a role could include City staff support to merchant organizations.

Implementation 2: See Land Use Chapter for additional implementation measures.

Policy LE 1.1.4: Prepare a development and design plan for the Central Business District.

Implementation 1: The plan should include an evaluation of possible City actions that could foster and encourage economic development. Such a role could include City staff support.

Implementation 2: See Land Use Chapter for additional implementation measures.

Policy LE 1.1.5: Expand commercial areas only when there is a demonstrated need for additional commercial land.

Implementation 1: See Land Use Chapter for implementation measures.

LOCAL ECONOMY (LE) GOAL 2:
A strong municipal tax base

OBJECTIVE LE 2.1: **An increased number of industrial and commercial businesses generating revenues to the City.**

Policy LE 2.1.1: Attract and retain those commercial and industrial businesses generating revenues to the city relative to their costs to the city.

Implementation 1: With the cooperation and involvement of the business community, develop an economic development strategy, identifying potential revenue generators within the City's market segment and City actions available to attract and retain such businesses. The strategy should consider the potential to offer incentives to attract targeted businesses while maintaining other General Plan land use, urban design, environmental and transportation goals.

Policy LE 2.1.2: As a major source of property tax, sales tax and labor supply, ensure a continuing supply of industrial and commercial property.

LOCAL ECONOMY (LE) GOAL 3:
A hierarchy of well defined, vital commercial areas meeting the retail shopping, entertainment and service needs of Fremont residents

OBJECTIVE LE 3.1: **Viable neighborhood shopping centers meeting the daily convenience shopping needs of City residents.**

Policy LE 3.1.1: Allow for neighborhood shopping centers of sizes and locations that maintain both choice and convenience for shopping as well as sufficient trade area buying power to support quality design, maintenance and merchandising.

Implementation 1: As part of a periodic General Plan review, assess the adequacy of the size and location of designated neighborhood commercial land in developing residential areas. Identify potential areas for redesignation as neighborhood commercial.

Implementation 2: As part of a periodic General Plan review, identify underutilized commercial areas and, where appropriate, recommend alternative land uses.

Implementation 3: For any General Plan Amendment application seeking to expand or create a neighborhood shopping center, require provision of a market study by the applicant. The Study should consider the potential for pre-existing commercial areas to serve the expected market area, as well as the potential for the projected market area to support the proposed uses.

OBJECTIVE LE 3.2: **Thriving community commercial centers whose function is to provide a wide range of goods in a focused, identifiable, pedestrian oriented commercial area.**

Policy LE 3.2.1: Actively promote the revitalization of existing community commercial centers, drawing on the unique and historic features of each community.

Implementation 1: See Land Use Chapter for implementation measures.

Policy LE 3.2.2: Actively promote the development of distinct identities for the newer and planned community commercial centers.

Implementation 1: See Land Use Chapter for implementation measures.

Policy LE 3.2.3: Encourage the location of businesses which by their scale and character are suited to pedestrian-oriented centers.

Implementation 1: See Land Use Chapter for implementation measures related to design and development plans for each commercial center. Plans for these centers should evaluate the role of the City in fostering appropriate economic development consistent with the plan.

OBJECTIVE LE 3.3: The Central Business District (CBD) as the City's principal specialty-retail, regional office, entertainment, government and cultural center.

Policy LE 3.3.1: Focus commercial development opportunities in a well defined, pedestrian and transit oriented high intensity core area near the Fremont BART station.

Implementation 1: See Land Use Chapter for implementation measures.

OBJECTIVE LE 3.4: Higher intensity commercial uses near CBD and Irvington BART Stations.

Policy LE 3.4.1: Permit the highest intensities of commercial use (including hotels) in the CBD within convenient walking distance of the BART Station.

Implementation 1: See the Land Use Chapter for implementation measures.

Policy LE 3.4.2: Encourage medium intensity commercial and office areas around the Irvington BART station, consistent with the scale and character of the Irvington area.

Implementation 1: See the Land Use Chapter for implementation measures.

OBJECTIVE LE 3.5: **High-volume retail shopping opportunities (such as home-improvement) for Fremont residents.**

Policy LE 3.5.1: Provide high-volume retail shopping opportunities in concentrated centers within close proximity to freeway access.

Implementation 1: See the Land Use Chapter for implementation measures.

OBJECTIVE LE 3.6: **Retail and commercial services in the industrial area (areas designated for industrial use), directly serving and compatible with industrial employers and employees.**

Policy LE 3.6.1: Provide retail and commercial services areas in industrial area to serve industrial employers and employees.

Implementation 1: See the Land Use Chapter for implementation measures.

LOCAL ECONOMY (LE) GOAL 4:
A diversified industrial employment base to meet the employee needs of the City's present and future workforce.

OBJECTIVE LE 4.1: **A significant increase in industrial employment and in the diversity of industries in the City.**

Policies: See Local Economy Goal 1 and Land Use Goal 3 for policies and implementation measures related to achieving this objective.

Chapter 6
Parks and Open Space

INTRODUCTION

From its inception Fremont has articulated and implemented open space policies that retain the diversity of its natural setting and emphasize the city's unique identity. Fremont's residents are never far from natural areas: the hills and baylands, Central Park, bicycle and hiking trails, regional and local parks. Each of these elements contributes to Fremont's feeling of openness as a community.

Fremont's extensive system of parks not only contributes to the open space character of the city, but also allows for near-by access to playfields, picnic areas and elements of Fremont's historic character.

This chapter describes Fremont's parks and its open spaces and is divided into seven sections, each discussing an aspect of open space and parks:

- Hill Planning Area
- Baylands and Wetlands
- Northern Boundary
- Parks and Recreation
- Trails
- Civic Open Space
- Gateways

While each element of Fremont's open space system is described in separate sections, each is as one part of a puzzle that, when put together, contributes to Fremont's unique and special identity. Fremont's open space network is illustrated in Figure 6.1

FREMONT GENERAL PLAN

OPEN SPACE DIAGRAM

- Open Space Frame — Represents feeling of openness. Does not refer to zoning designation
- Ridgeline
- Toe of the Hill
- Natural Gateways
- School Parks
- Neighborhood and Community Parks

CITY OF FREMONT BOUNDARY

SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

BASE MAP DATE MAY 1989

FIGURE 6-1

HILL PLANNING AREA

Setting

The Hill Planning Area encompasses several defined areas in Fremont's hills. The area includes eight distinct subareas: Base of the Hills, the Hill Face, Niles Hills, Vargas Plateau West, Vargas Plateau East, Mission Creek, Sheridan Road, and Mission Hills West. These areas are described in the Hill Planning Area section of the Land Use Chapter.

The term Hill Area denotes that portion of the Hill Planning Area (excluding Vargas Plateau East, Sheridan Road and Mission Hills West) controlled by the 1981 hill initiative. The Hill Area of Fremont consist of approximately 13,000 acres lying generally north and east of Mission Boulevard and I-680. The hills rise prominently from Fremont's flatlands, forming a seasonal green and gold backdrop to the city. The ridgeline varies in elevation from about 1,800 feet on the northern end to 2,500 feet at Mission Peak near the southern end.

Public Lands. About 2,800 acres of the Hill Area is in public ownership. Largest of the public holdings is the 2,596-acre Mission Peak Regional Preserve. This Reserve is managed by the East Bay Regional Park District, but parts are owned by the City and by Ohlone Community College District. Several other smaller properties on the hill face, totaling about 100 acres, are owned by the City.

Private Lands. The remaining 10,000+ acres of land in the Hill Area are privately owned.

Functions and Use

Natural Resources

Important natural resources found in the hills include wetlands, habitat for a variety of plant and animal species and mineral resources. These are described in the Natural Resources Chapter. There are no woodlands (or forest lands) for the managed production of resources in Fremont.

Agricultural Use

Much of the hills is productive agricultural land used for grazing (see the Soils section of the Natural Resources Chapter). Over half the Hill Area (including some public lands) is covered by agricultural preserve (Williamson Act) contracts. These contracts allow land to be assessed at its agricultural value rather than as land that could be developed, for the term of the contracts.

Watersheds

Most of the 20 intermittent creeks which drain the hills drain into Lake Elizabeth or to the Bay and are not part of Fremont's watershed. However, some creeks in the northern section of the hills drain into Alameda Creek and become part of the city's water supply (see Natural Resources Chapter, Water Resources section).

Outdoor Recreation

The Mission Peak Regional Preserve is a heavily used recreation area for hiking, bird watching, nature study, hang-gliding and other recreational pursuits.

Protection of Public Safety

Although houses have been built at the base of the hill area there are major constraints to development at higher elevations on the Hill Face. In some portions of the Hill Planning Area there are unstable and highly erodible slopes and potential landslides. There is also poor access increasing the difficulty of providing emergency medical and fire services to this area. Limited access also means constrained egress in the case of fire or other emergency (see the Health and Safety Chapter).

Regulatory Environment

Development in the Hill Area is controlled by a citizen initiative passed in 1981. The regulations of that initiative were incorporated in the General Plan and are found in this General Plan in the Land Use Chapter under "Hill Area." That section should be reviewed for all regulations and definitions for the Hill Area.

Projections

Public Lands

Through actions by the City, private developers and the East Bay Regional Park District, the amount of land in public ownership is expected to increase.

The Regional Park District has funds from a bond measure passed in 1988 which can be used for:

- acquisition and development of a Vargas Plateau Regional Park in cooperation with the City of Fremont;
- construction of a trail between Garin Regional Park (in Hayward) and Mission Peak Regional Preserve; and
- expansion of the Mission Peak Regional Park and provision for improved public access (trail heads and parking areas).

The City is considering developing a golf course on a portion of its land adjacent to the Mission Peak Regional Preserve at the end of Stanford Avenue. In addition, the City expects to receive further dedication of land on the Hill Face as part of development projects seeking to maximize development potential on relatively accessible and less constrained land.

These actions should increase the accessibility and public recreational use of the Hill Planning Area.

Private Lands

Under the Hill Initiative, the extension of urban services to areas at higher elevations than currently (1990) served would increase the land's development potential. Extension of services over Mission Pass to the Vargas Plateau West would allow for significant residential development, especially on parts of the Vargas Plateau. Such development would increase the supply of housing but would also have impacts on the city's open space character. Impacts would include loss of productive grazing land, disturbance and loss of wildlife habitats, diminishment of the visual and aesthetic character of the Open Space Frame, and possible impacts on Alameda Creek watershed. Extension of services to the Vargas Plateau West would also increase the development potential of the Hill Face. Finally, extension of services would significantly increase the pressure for development on the 3,500+ privately-owned acres in the hills in an area referred to in the Land Use Chapter as Vargas Plateau East and Sheridan Road subareas.

The impacts and benefits of development in the Vargas Plateau East area and its potential for development easterly of the city boundary line require careful analysis prior to any commitment to provide services. Accordingly, this plan calls for a two phase planning process described in the Land Use Chapter under "Hill Planning Area."

BAYLANDS AND WETLANDS

Setting

Much of Fremont's open space, and especially the land closest to the Bay, is wetlands. Wetlands include areas that are perennially wet, such as creeks, ponds, and the Bay. Seasonal wetlands are lands which hold water for a portion of the year but where no standing or running water is visible at other times.

The general locations of most wetlands have been roughly mapped by the U.S. Fish and Wildlife Service using satellite infrared analysis. Actual boundaries are delineated on a case-by-case basis when development proposals require filling wetlands. Wetlands cannot be filled without a permit from the United States Army Corps of Engineers.

There are no coastal beaches or rivers in Fremont.

While most of the wetlands are located along Fremont's westerly perimeter, wetlands further inland (generally east of I-880) include freshwater ponds, creeks and lakes interspersed with existing development. These include Lake Elizabeth, the tule ponds by the BART station and the Alameda Creek quarry ponds. Wetlands are discussed in more detail in the biological resources section of the Natural Resource Chapter.

Public Lands

Approximately 10,000 acres of Fremont's wetlands are within the San Francisco Bay National Wildlife Refuge created in 1972. Wildlife protection is the Refuge's highest priority, and public use is a secondary concern. Accordingly, access is highly controlled. A Visitor's Center is located near the Dumbarton Bridge. Other wetlands are within Coyote Hills Regional Park (1,039 acres) which is owned by the regional park district.

The Alameda County Water District and the flood control district own most of the wetlands and contiguous uplands in developed areas of Fremont. With a few exceptions, they are managed for flood control or water recharge, rather than for their recreation and habitat open space functions (see Water Resources section of the Natural Resources Chapter for further discussion).

Privately-Owned Wetlands

Privately-owned wetlands remain along the fringes of the Bay, in a few urbanized areas, and along creeks and scattered ponds in the hills.

Functions

Natural Resources

Fremont's wetlands and contiguous uplands are an invaluable ecological resource, as described in the Natural Resources Chapter. The San Francisco Bay National Wildlife Refuge, Lake Elizabeth and the associated nature area, and the Alameda Creek quarry ponds are all important resources for ecological and other scientific study purposes. The lakeshore area of Lake Elizabeth is also an important resource protected from development in Central Park.

Managed Production of Resources

A portion of Fremont's wetland area is used for commercial salt production (see Mineral Resources section of the Natural Resources Chapter). Some upland areas adjacent to wetlands are in agricultural production (see following section, "Northern Boundary)." There is no commercial fishing industry in Fremont.

Outdoor Recreation

Most of Fremont's Bay wetlands are incorporated in the San Francisco Bay National Wildlife Refuge or in the Coyote Hills Regional Park. Both of these facilities are used for hiking, picnicking, bird-watching, and other recreational activities. A pier within the Refuge provides access to Bay fishing and there is also small boat access. The regional park has an interpretive center, an Ohlone Indian shellmound, a reconstructed Indian village, and trails.

Protection of Public Safety

Wetland areas are generally underlain by Bay muds and other unstable soils which are highly susceptible to liquefaction, subsidence and other dangers during seismic events (See Health and Safety Chapter).

Regulatory Environment

The City of Fremont and the U.S. Army Corps of Engineers are the primary regulatory agencies charged with protection of wetlands within the city's boundaries. Several other public agencies are also concerned with wetlands, including the California Department of Fish and Game, the U.S. Environmental Protection Agency and the U.S. Fish and Wildlife Service. Permits to fill wetlands must be obtained from the Corps of Engineers which seeks input from other public agencies prior to granting such permits.

Because of the tremendous national loss of wetlands, the Corps operates under a Federal requirement of "no net loss" of wetlands due to filling. Developers may be required to (a) find an alternative site, (b) avoid the wetlands in the development plan, or (c) purchase or expand an off-site wetlands to replace the destroyed wetlands.

Through its environmental review process, the City also determines whether a proposed project will affect wetlands. In its analysis, the City relies on the Corps of Engineers' "unified" methodology for delineating wetlands. The City can require mitigation measures that preserve and augment wetlands as a condition of project approval. For example, Bayside Business Park developed a 250-acre wetland habitat, the largest such private project ever completed on the Bay.

Projections

Under Federal legislation approved in 1989, the U.S. Fish and Wildlife Service has been authorized to purchase available remaining Bay wetland parcels for expansion of the Wildlife Refuge. In Fremont, 2,300 acres (including public lands) have been identified for Federal acquisition. However, funding is expected to be provided in small increments over several years.

The City anticipates several parcels of land with wetlands will be proposed for development in the next ten years. Almost all of these parcels are identified by USFWS for possible purchase.

Due to the resource and open space values of wetlands, the City will seek to identify and protect remaining wetlands, while allowing development to proceed which conserves identified wetlands.

Modifications are planned for the Alameda Creek quarry wetlands area. The Alameda County Water District has proposed improvements to the ponds to increase their ability to recharge the Niles Cone Aquifer (see Water Resources section of the Natural Resources Chapter). At the same time, the park district is proposed to improve the recreational character of the quarry area.

Finally, any extension of BART could have a significant impact on the wetlands south of Walnut Avenue. An extension could also have an impact on Lake Elizabeth.

NORTHERN BOUNDARY

Setting

Four major open space areas compose the northern boundary of Fremont's space frame: Alameda Creek, Alameda Creek quarries, Ardenwood Historic Farm, and agricultural lands near Coyote Hills. Each is described below.

Alameda Creek

When the Army Corps of Engineers rerouted Alameda Creek into a flood control channel beginning in the 1960s, it created the 12-mile long Alameda Creek Regional Trail managed by the East Bay Regional Park District (EBRPD). The trail extends from the mouth of Niles Canyon, to the Bay and provides a clearly defined northern perimeter for Fremont s open space frame.

Alameda Creek Quarries

This group of water-filled quarry pits covers about 460 acres along Alameda Creek. Although the natural environment of the quarries has been profoundly altered, some riparian woodland and marsh area remains. Most of the quarries are owned by the water district and EBRPD.

Ardenwood Historical Farm

Until the 1980s, the area of Fremont north of Route 84 and west of I-880 was part of a large farming operation. When the area was proposed for development the City successfully preserved 200 acres of land in a regional park to serve as a reminder of the area's agricultural past and as part of the

open space frame. The working, historic farm is owned by the City and managed by EBRPD.

Private Agricultural Lands

Since the arrival of the Mission fathers in the late 1700s, Fremont's flatlands have been valued for farming. Today, only the 400 acres of intensively cultivated farmland on the Northern Plain remains of the city's privately cultivated farmlands. Of those 400 acres, about 150 acres are in an open space easement which limits the use of the land to agriculture or other open space uses. This agricultural area is rated by the U.S. Department of Agriculture as being "prime" agricultural soils.

Functions

Natural Resources

Alameda Creek is a critical element of the city's water supply. The creek banks provide valuable wildlife habitat. Although modified by man, the Alameda Creek Quarries have a variety of wetlands vegetation and associated wildlife, and are a valuable resting area for shore birds and migratory fowl. A portion of the Ardenwood Farm and private agricultural area is underlain by mineral resources identified by the State as being of regional importance (see Natural Resources Chapter for further discussion of resource functions). Ardenwood farm is also an important resource for ecological and other scientific study purposes.

The agricultural uses in the Northern Boundary area are a relatively benign neighbor for the wetlands resources of the regional park and wildlife refuge. The farmland protects the refuge and park from encroachment by less compatible uses. Portions of the agricultural areas are believed to have potential for conversion to wetlands. Such conversion, if successful, would help to reverse in a small way the historic loss of wetlands resources around the Bay. Conversion would only occur if this land was purchased for this purpose by a public agency or by private interests seeking to mitigate wetlands impacts elsewhere in the South Bay.

Managed Production of Resources

The primary purpose of the ponds in the Alameda Creek Quarries is recharge of the groundwater aquifer underlying Fremont. The farmland in the Northern Boundary area produces a wide variety of crops, including cauliflower, lettuce, corn and other vegetables for commercial markets.

Outdoor Recreation

The Alameda Creek Regional Trail borders the Alameda Creek flood control channel and links Coyote Hills Regional Park and the San Francisco Bay National Wildlife Refuge with the Alameda Creek quarries. A gravel path on the northern side is used for horses, and a paved path on the south side for bicyclists; both paths are used by pedestrians. A portion of the Alameda Creek Quarry area is within Niles Community Park and is open to fishing.

At the Ardenwood Historic Farm visitors can personally experience life on a late 19th century farm, helping with planting, harvesting, and other farm work.

Public Health and Safety

The Alameda Creek flood control channel was designed to protect large areas of Fremont from periodic flooding. The open space character of the Alameda Creek Quarries protects the city's water supply from some urban pollutants.

Projections

EBRPD plans to develop a regional recreation area at the Alameda Creek Quarries. The logistics, design and engineering involved in maintaining the use of the quarries for groundwater recharge while allowing recreational use have complicated the development of this long-planned park. Current estimates are that the park should be developed by 1995.

The only link in Fremont's northern open space frame which is not publicly owned is the 400 acres of farmland at the city's entrance. The Wildlife Refuge proposes to acquire about 300 acres (including land currently under an open space easement). Regardless of the Federal proposal, agriculture remains an appropriate use of the land in this area. A park for active recreational uses, such as ballfields, is also a possible use of the land in this area. There is also potential to convert some of this agricultural area to wetlands, if purchased for that purpose. Any future use, including agriculture, should be compatible with the Wildlife Refuge.

PARKS AND RECREATION

The most meaningful form of open space for many residents is a nearby playground, ball field, or picnic area. Fremont has created a hierarchical system of parks to serve those needs, with Central Park as its focal point. Schools and private parks supplement the City's facilities. Although Fremont's parks are primarily for recreation, they also protect natural and historical features.

Setting

City Park Resources

Fremont owns or manages 1,012 acres of lands in parks (1990). This is about six acres per 1,000 people, not including 900 acres in the Mission Peak Regional Preserve and 200 acres at Ardenwood Farm which are owned by the City but managed by the East Bay Regional Park District. Total City-owned park acreage including these parks is 2,112 acres.

The City parks are organized into a hierarchy based on the types of uses and service areas for each category. The number of acres for each type of park is given in Table 6-1 the characteristics of each park type are described below. Figure 6-1 shows park locations in the city.

Central Park

Central Park is Fremont's one "city-park," designed to serve the whole city. It also serves as the neighborhood park for the immediately surrounding neighborhood. It contains a full range of recreational uses including extensive turf, night-lit sports fields, boating, swimming, a community center, and wildlife habitat. Its centerpiece is Lake Elizabeth which is owned by the flood control district. The City Government Building and Main Library are located adjacent to Central Park in an area designated for Civic Center uses (see Central Planning Area Land Use Diagram). A senior center and animal refuge are also located on the edges of the Park.

Community Parks

Fremont's nine community parks are intended to be a combination of landscaped open space and more intensive recreational and sports facilities for organized or supervised activities. Most contain lighted sports fields and tennis courts as well as play equipment, picnic tables, restrooms and off-street parking. Three of the community parks have community centers and recreation programs. Community parks often serve as a neighborhood park for the immediately surrounding area.

Table 6-1
City Parks in Fremont, 1990

	No.	Total Acreage	Acreage
Central Park	1	450	450.0
Community Parks	9	7-19	142.6
Neighborhood Parks	21	1-11	145.7
Historic Parks	7	.25-20	48.5
Trail Parks	4	4-6	203.4
School Parks	4	2-5	18.8
Pocket Parks	3	.25-2	2.5
	49 parks		1,012.0

Source: City of Fremont

Neighborhood Parks

Fremont's 21 neighborhood parks are intended to serve the immediately surrounding neighborhood. They generally include meadow-like open space areas for informal leisure and free play activity. Thirteen are next to

elementary schools, most contain play apparatus, six have a sports facility (e.g., basketball court, softball or soccer field) and seven have paved bike paths. Natural areas have been preserved in a few parks.

Historic Parks

Fremont has seven parks which were established around an important historic building or other resource (such as a plaza, monument, or nursery). Some of the resources have been restored and are accessible to the public or open to tours (Ardenwood Historic Park is discussed separately under the Northern Boundary section of this Chapter).

Trail Parks

Four linear parks within residential subdivisions are designated as trail parks. Three have paved bike trails or picnic tables. The large Antelope Hills Trail Park has been left in its natural state.

School Parks

There are four school parks: parklands adjacent to schools which are leased by the City from the school district. One has play equipment. These park areas are not permanently committed to park use.

Pocket Parks

The three pocket parks are very small (less than one acre); some have play equipment.

Other Park and Recreation Resources

Fremont has a variety of other park and recreation resources.

Regional Parks

The East Bay Regional Park district owns or manages 4,500 acres of regional parks, preserves and trails within the City of Fremont, as shown in Table 6-2. Approximately a quarter of this open space is owned by the City and managed by the EBRPD under a joint agreement. Another 450+ acres are jointly owned by the Alameda County Water District and EBRPD and are slated for development into the Alameda Quarries Regional Recreation Area in the next ten years.

Table 6.2
East Bay Regional Park Land in Fremont

	Approx.Acres	Miles of Trails
Coyote Hills Regional Park	966 +	26 +
Ardenwood Historic Farm	208 +	
Alameda Creek Regional Trail		12 one way
Mission Peak Regional Preserve	2,819 +	19
(Alameda Creek Quarries Regional Recreation Area - undeveloped)	<459 >	2 +
	4,452 + acres	59 + miles

Source: East Bay Regional Parks District; City of Fremont

Schools

The city's forty schools provide open space and informal recreation opportunities within neighborhoods, although public use is limited to certain times of the day and year. Some facilities are open to the public for structured recreational activities, such as baseball fields, football and soccer fields, tennis courts, swimming pools, gymnasiums, and multi-purpose rooms/classrooms. Many schools have vacant land which has the potential to be developed for park and recreational purposes.

Ohlone College has several recreation facilities on its campus, including a gym and swimming pool, but these are generally restricted to student use.

The California Schools for the Deaf and the Blind (two separate institutions on one 96-acre site) also have specialized recreational facilities and open playfields. The public may use the open areas when they are not needed for the school program.

Private Parks and Recreation Facilities

Several neighborhoods have private park-like open spaces and recreation facilities, such as tennis courts and swimming pools. Many of these facilities were first developed as an alternative means for private developers to meet park needs within the community. Some of the park-like areas, although nominally private, are available to the public. Use of the tennis courts and swimming pools may require membership or per-use basis fee.

Fremont also has a variety of privately-operated health clubs, bowling alleys, tennis courts, and other facilities available to the public for a fee. Residential development is planned for the city's one remaining private golf course.

Public Park Standards

Fremont adopted standards for regional, city, community and neighborhood parks in 1977. The standards, summarized in Table 6-3, include minimum number of acres needed per 1,000 people, park size, service radii and design. The design standards focus on surveillance, maintenance, location, funding priorities, and historic preservation priorities. There are no current standards for historic, trail, school and pocket parks.

Table 6-3
Fremont Park Standards (1990)

Park Type	Acres/1000 Residents	(Acres)	Radius
Regional	12.4	no std.*	Within 30 min. driving time
City	6.4	no std.*	City
Community	1.2	15 or 25**	1 - 1.5 mile
Neighborhood	.7	5-7	.5 -.75 mile

* no std: no size standard adopted
**If adjacent to a school, the standard is 15 acres; if not, the standard is 25 acres

Source: City of Fremont

Table 6-4
Parks and Standards (1990)*

Park Type	Standards Acres/1000 pop.	Existing Parks (1990) Acres/1000 pop.
Regional	12.4	27.0
City	6.4	2.7
Community	1.2	.9
Neighborhood	.7	.9

Source: City of Fremont

Achievement of Standards

As shown in Table 6-4, Fremont has met its population ratio standards for neighborhood parks. It has not yet achieved its standards for city or community parks. Standards for regional parks have been more than exceeded.

The City's park service radius standard is intended to ensure no one has to travel too far to get to a park and parks will be evenly distributed throughout the city. The City's standards have been met except for the following areas:

- The Glenmoor neighborhood west of Centerville (although this neighborhood has a private neighborhood park);
- The heart of Centerville (Thornton Avenue and Fremont Boulevard);
- The neighborhood bounded by Driscoll Rd., Paseo Padre Parkway and Washington Blvd.;
- The area east of Mission Boulevard and south of I-680 (although these neighborhoods are immediately adjacent to the Mission Peak Regional Preserve and Ohlone College).

Some neighborhoods are served by parks leased from the school district (i.e., "school parks"). The school park leases will expire in the next ten years, and permanent City park use is not guaranteed.

Adequacy of Standards

Fremont's park standards should be revised to consider the following issues:

- the barriers to park access that are created by busy streets and railroad tracks
- residential densities and the number of people served
- the role of schools and private parks in meeting park needs
- design standards for handicapped access, trails and landscaping
- standards for special purpose facilities, such as a community swimming pool, sports complexes with lighted play fields, model airplane, car and boat facilities, teen center, and dance facilities.

Park and Recreation Needs

If Fremont grows to its projected population of 198,400 by 2000, it will need 157 acres of new park land assuming five acres per 1,000 residents -- the maximum dedication permitted to be required from private developers under State legislation (the Quimby Act). Yet opportunities for park acquisition are becoming more constrained as Fremont matures and the amount of vacant land dwindles. In this context Fremont needs to reassess what kinds of recreational facilities and opportunities its residents want and how the City can provide them. Better use of existing public land (including schools and flood control or water district lands) may be a possibility. Facilities such as night-lit sports fields could be located in the industrial areas of the city where they have not previously been proposed. Finally, Fremont's park standards need to be updated to better serve the community. These issues can best be addressed in a two step process proposed in this Plan: a park and recreation needs assessment followed by a complete updating of the City's park standards. Until the standards are updated, the City will continue to acquire parkland to meet the park needs identified in this General Plan, including active sports facilities and parkland in underserved areas of the city.

Central Park

Several recreational and other facilities have been proposed for Central Park or for the Civic Center area adjacent to the Park. These uses include a swim/gym complex, an ice skating facility, a fire station, a golf course, a cultural arts facility and other new City administration buildings. A Park master plan is needed to guide decisions regarding the placement of facilities and to consider facilities locations in the context of long term goals for the character and quality of the park. Without such a plan, the development of all proposed facilities could have a significant negative impact on the park.

A BART line extension is proposed to pass through Central Park. The tracks must be placed underground trenched, covered and sound insulated or the tracks and trains would have a significant negative impact on the character of the Park due to noise and visual intrusion.

Other Park Facilities

A golf course is proposed on City-owned land at the end of Stanford Avenue. This land is currently part of the Mission Peak Regional Preserve but has long been proposed as the location for a public golf course. Fremont currently has no public golf course. If developed, the golf course would increase the amount of land nominally considered citywide park land. The City also has plans to provide community centers in those community parks without an existing center.

New Park Funding: The Quimby Act and Impact Fees

Most new parks, and park acquisition and development funds come from the application of Quimby Act ordinance requirements to residential subdivisions. The Quimby Act permits Fremont to require developers to dedicate parkland or to pay in-lieu fees equivalent to the value of the land. The City requires the maximum permitted under the Quimby Act, or 5 acres per 1,000 population.

TRAILS AND CONNECTORS

Setting

The concept of an integrated network of linear open spaces and trails was clearly articulated in early plans for Fremont. They are an important open space and recreational resource. Many trails and paths form segments of this system but the system is far from complete.

Existing Trails

The Alameda Creek Regional Trail, described in a previous section of this Chapter, is an important element of the city's trail system, extending from the hills to the Bay. Another important trail is the two-mile loop trail around Lake Elizabeth which connects to a trail to the BART station on the north and a trail to Gomes Park on the south.

The four trail parks described in the section on city parks provide landscaped pedestrian and bicycle links between streets in residential subdivisions. One of these, Antelope Hills, encompasses 185 acres of public open space within a residential neighborhood in the lower Hill Area.

Fremont has five other linear easements with developed pathways. Although similar to the trail parks, they are not part of the city's park system. Some are on flood control district or PG&E rights-of-way. Like the trail parks, they provide shortcuts between streets for bicyclists and pedestrians.

A final, but unofficial, element of Fremont's trail system are several privately-owned linear open space areas within residential and industrial subdivisions.

In addition to trails and paths within urbanized areas, there are extensive trail systems within the Mission Peak Regional Preserve, Coyote Hills Regional Park, and the San Francisco Bay National Wildlife Refuge.

Assessment of Existing System

Fremont's existing trail and path system could be improved by completing links between some existing trails. Connections and destinations could be identified. Such improvements would help complete the integrated system envisioned by earlier plans.

Projections

There are still many opportunities available to close gaps and expand the existing trail system. Existing utility easements and rights-of-way, such as the Hetch-Hetchy underground water lines, could be used for local pedestrian paths as well as for bicycle commuter routes. Parts of these rights-of-way have been incorporated into adjacent city parks and some already are developed. Flood control channels provide another opportunity. Concerns with maintenance, security and legal issues would need to be addressed in cooperation with other public agencies.

Several regional trails connecting Fremont to other parts of the Bay Area are also proposed for within Fremont (see Trails Map in the Transportation Chapter). These include two major trails proposed by the East Bay Regional Park District in Fremont's Hill Area: a Garin Regional Park to Mission Peak trail (which is part of the Bay Area Ridge Trail), and a Niles Canyon Trail connecting the Alameda Creek Trail with Sunol. The Bay Trail, encircling the Bay, is proposed to pass through Fremont west of I-880 between Stevenson Boulevard and the southern city limits. There will also be a connection from the Bay Trail to Mission Peak Regional Preserve. Most of the Bay Trail's proposed alignment is along future streets. As these trails are implemented, the City can assist in planning their implementation, provide improved connections with local trails and identify opportunities for parking and staging areas.

The California Recreational Trails Act requires cities to consider the feasibility of integrating its trail routes with appropriate segments of the state system. There are no state system trails in the vicinity of Fremont.

CIVIC OPEN SPACES

Civic open space is a plaza, a courtyard, a walkway, or another outdoor gathering, sitting, or eating place, usually surrounded by buildings or other structures that help give it form. It may be public or it may be semi-private as for employee use. Community celebrations, fairs, and other events become associated with these special places.

Setting

Most of Fremont's civic open spaces date from the past. Some are public and some are associated with a church or institution. Examples are Williams Park with its historic carriage house in the Central Business District, the Presbyterian Church cemetery in Centerville, the Irvington Plaza and monument in Irvington, and the Carnegie Library entrance area and Veterans' Memorial Hall in Niles. As development has grown around Mission San Jose, the entrance area and the olive grove behind the Mission and its historic cemetery have become valued civic open space. The City-owned Olive Hyde Art Gallery entry plaza is another civic open space resource near the Mission. One of the few planned civic open spaces in Fremont is the broad bricked plaza at the City Government Building.

Even parking lots and streets can temporarily serve as usable civic open spaces when they are blocked off for special community events such as the seasonal and monthly flea markets at Ohlone College and in the Niles district, the Fremont Art and Wine Festival, Charlie Chaplin days in Niles and Mission Days in Mission San Jose.

Outdoor sculptures and public art can enhance civic open spaces. Fremont sets aside one percent of the construction cost of new public buildings for public art. Several sculptures have been installed in public facilities and parks. Commercial and industrial developers have also placed sculptures in prominent locations in their projects.

Projections

Most of the Fremont's civic open spaces were not planned to serve that purpose. As the city becomes more densely developed, recognition and protection of these existing civic open spaces, as well as planning for new ones, becomes more important. Usable open space areas can be an important element of commercial districts, as well as public facilities such as BART stations, community centers and City administrative buildings.

GATEWAYS AND LANDSCAPED ROADWAYS SETTING

Setting

Gateways and other identified entrances to the city help reinforce Fremont's sense of identity. Gateways are where visitors and residents are welcomed to the city — where they sense they have arrived in Fremont.

Fremont has four natural gateways: Mission Pass, Niles Canyon, the Dumbarton Bridge at Coyote Hills and, from BART, the Alameda Creek Quarries. These gateways mark the passage from open land or water into the developed city. These natural gateways are discussed in more detail in the Natural Resources Chapter.

At most entry points from neighboring cities there are no natural changes in land form or distinctive architectural features to signal arrival in Fremont. In some locations the City has created gateways using landscaping and signs, however there is no consistent gateway design or theme.

Most people entering Fremont do so on freeways. Freeway design leaves little room for landscaped gateway treatments, although opportunities exist at interchanges as drivers enter the city street system. BART stations are also points of entry into Fremont.

Fremont's broad, landscaped boulevards further distinguish Fremont from its neighbors, as do the soundwalls, fences and landscaping which back on to many boulevards from residential subdivisions.

Projections

Without a special effort to clearly define its entry points, continuing urban development will make it increasingly difficult to distinguish Fremont from its neighbors. This is especially true at the city's southern boundary where the open space frame is incomplete. Landscaping and entrance signs would help make Fremont stand out as "place" or "destination". A coordinated gateway design system would also help reinforce Fremont's special identity.

The constraints of freeway design preclude gateway treatments in most locations. However, as interchanges are rebuilt over the next five years the City can seek opportunities to encourage CALTRANS to provide special landscaping, and the City can erect signs where drivers pass on to the city's street system. For example, the City has set aside a strip of land on the south side of Stevenson Boulevard at the I-880 Freeway off-ramp for a landscaped gateway. BART stations and landmarks near gateways can also be clearly identified as being within the City of Fremont.

In addition to formal gateways, the City should carefully review building designs at natural gateways to encourage buildings which enhance the gateway character and contribute to Fremont's visual image. Recognition, protection and enhancement (though landscape treatments) of the major natural gateways is also possible.

Goals, Objectives, Policies and Implementation

Fundamental Goals

The importance of Fremont's open space to its character as a community is reflected in several of the **Fundamental Goals** presented in Chapter 2, including the following:

F 2 **AN HARMONIOUS BLEND OF THE NATURAL AND BUILT ENVIRONMENTS**

F 3 **A CITYSCAPE WITH AN OPEN FEELING**

F-7 **AN OPEN SPACE FRAME THAT INCLUDES THE HILLFACE, BAY WETLANDS AND GATEWAYS**

F-12 **PARKS, RECREATIONAL FACILITIES AND OPPORTUNITIES**

Park & Open Space Goals

Chapters in other sections stress the importance of Fremont's open space to the city's natural resources.

In this Chapter, the following goals build on the Fundamental Goals:

GOAL OS 1: **Open space in the hills to protect Fremont's eastern open space frame**

GOAL OS 2: **Recognition, protection, and enhancement of significant natural areas and wildlife habitats in the city, including Bay tidal, seasonal, and freshwater wetlands, and open meadows and fields**

GOAL OS 3: **Parks and recreation to meet the community's needs**

GOAL OS 4: **Urban open spaces to enhance community identity and the quality of the urban environment**

GOAL OS 5: **Distinctive gateways and roadway landscaping for Fremont**

OPEN SPACE (OS) GOAL 1:
Open space in the hills to protect Fremont's eastern open space frame

OBJECTIVE OS 1.1: **Protection of the Hill Face, ridgeline, and stream corridors**

Policy OS 1.1.1: Land with environmental resources such as stream corridors shall be conserved (see Land Use Chapter for implementation measures).

Policy OS 1.1.2: Encourage preservation of open space on the Hill Face, ridgeline and Niles Canyon to protect the city's visual character.

Implementation 1: Encourage creation of large, contiguous parcels of permanently protected open space when considering transfer of development rights or other techniques for conserving open space. When open space is contiguous to an existing parcel of land owned or managed by the East Bay Regional Park District (EBRPD), or when a parcel is included in the EBRPD master plan for inclusion in a park or preserve, encourage EBRPD to work with the City in managing such land.

Implementation 2: Establish procedures and techniques for voluntary donation of funds or land for hillside protection. Such procedures and techniques could include creation of a land trust or donation programs for businesses and citizens.

Implementation 3: Monitor the uses of Hill Face lands adjacent to the city, especially in Niles Canyon, to ensure protection of the historical landscape, wildlife habitat and Alameda Creek watershed.

OBJECTIVE OS 1.2: **Hill Area residential development sensitive to its environment and as unobtrusive as possible (see Land Use Chapter for policies and implementation measures related to this objective)**

OBJECTIVE 0S 1.3: A Regional Park on the Vargas Plateau

Policy OS 1.3.1: Acquisition and development of a Regional Park on the Vargas Plateau by the East Bay Regional Park District shall be supported by the City. Park facilities and access should be consistent with the City's goals for this area as defined during the Hill Area planning process described in the Land Use Chapter.

Implementation 1: Encourage the East Bay Regional Park District to acquire, plan and develop a Vargas Plateau Regional Park or Preserve in cooperation with the City of Fremont.

Implementation 2: Review plans for any park on Vargas Plateau for consistency with the City's goals and objectives for the area.

OPEN SPACE (OS) GOAL 2:
Recognition, protection, and enhancement of significant natural areas and wildlife habitats in the city, including Bay tidal, seasonal, and freshwater wetlands, and open meadows and fields

OBJECTIVE OS 2.1: A National Wildlife Refuge that incorporates and restores Bay wetlands

Policy OS 2.1.1: The City shall actively support expansion of the San Francisco Bay National Wildlife Refuge.

Implementation 1: Support efforts to obtain Federal and State funding to complete the Wildlife Refuge in a timely manner.

Policy OS 2.1.2: Land uses and activities in areas adjacent to the Wildlife Refuge must be compatible with, and, if possible, should promote the goals of the Refuge.

Implementation 1: Evaluate development projects to assess as their potential impacts on the Wildlife Refuge.

Implementation 2: Prohibit residential subdivisions contiguous with the Wildlife Refuge to limit the threat of domestic and feral animals.

OBJECTIVE OS 2.2: Protection and enhancement of wetlands within the city

Policy OS 2.2.1: The City shall take an active role in protecting wetlands. There shall be no net loss of wetlands as a result of development in Fremont.

Implementation 1: Early assessment of environmental constraints and resources should be conducted and submitted with applications for development of projects in or adjacent to wetland areas. Early consultation with the City regarding the implications of the environmental assessment for proposed development is recommended. See Land Use Chapter discussion and Policy 3.11 in the Land Use Chapter.

Implementation 2: Conditions of development approval shall include measures to protect wetlands, including long-term monitoring and maintenance programs as appropriate. Off-site mitigation should be used only if on-site mitigation is not feasible and if the loss of on-site wetlands is out-weighed by a specific public purpose. The replacement off-site mitigation site should be nearby.

Implementation 3: Require that proposed development be compatible with wetlands, both in terms of the allowed uses, and in the arrangement of the buildings, parking, landscaping, access, drainage, runoff, and other facilities on the parcel.

OBJECTIVE OS 2.3: Conservation of natural areas within the city

Policy OS 2.3.1: Publicly owned unique natural areas remaining in the flatland area of the city (see Natural Resources Chapter, Figure 9-3) shall be managed to protect and enhance wildlife habitats to the degree feasible (See Biological Resources Section of the Natural Resources Chapter for implementation measures).

Policy OS 2.3.2: The City shall require facilities such as a golf course in the Hill Area and sports facilities in the baylands to be sited, designed, and developed in a manner sensitive to the natural environment.

Implementation 1: Design intensively used recreational facilities to retain and enhance natural features and mitigate environmental impacts to the degree feasible.

OBJECTIVE OS 2.4: Integration of natural and historic features into new development

Policy OS 2.4.1: The City will give special consideration to protecting natural and historic elements in approving designs for new development. Developments should maximize preservation of natural waterways, landmark and heritage trees,

wildlife habitats, and other natural and historic features and provide for their protection and enhancement during and after construction. Proposed developments should include physical and visual access to natural features and historical sites.

OPEN SPACE (OS) GOAL 3:
Parks and recreation to meet the community's needs

OBJECTIVE OS 3.1: **A range of park, recreation and cultural arts facilities and activities serving the needs of a growing population and accessible to all residents**

Policy OS 3.1.1: Parks and recreation facilities shall be consistent with the identified needs of the community.

Implementation 1: Undertake a park and recreation needs assessment. The study should include but not be limited to:

- An assessment of the kinds of special purpose facilities that are needed (e.g., regulation sports fields, swimming pools, boating, and fishing) and whether potential community usage will be great enough to justify their development; and

- An assessment of the needs of special user groups: families, seniors, disabled, and employees in Fremont's commercial and industrial areas.

Implementation 2: Prepare a Recreation Plan based on the recreation needs assessment and amend the Parks and Open Space Chapter of this General Plan accordingly.

Policy OS 3.1.2: The City's park standards shall include standards for distance and accessibility such that parks can generally be safely reached and used by pedestrians, bicyclists, children, seniors, the disabled, and others with special needs.

Implementation 1: Review and revise standards for all categories of city parks and recreation facilities. The revised standards should consider the parks and recreation needs assessment, present and future demographics, residential density of areas to be served, potential barriers to access, the proximity and availability of private parks and recreation facilities, and public school playgrounds, and design and maintenance issues.

OBJECTIVE OS 3.2: Sufficient park, recreation and cultural arts facilities to meet the needs of an expanding population

Policy OS 3.2.1: While new standards are being developed, the City shall continue to expand its park facilities at a minimum of 5 acres per thousand population. The following park standards shall be used while new standards are being developed.

PARK STANDARDS

	Service Radius	Acres/ 1,000 population	Size (acres)
Regional Parks	20 miles	12.4	d.n.a.*
City Parks	City	6.4	d.n.a.
Community	1 - 1 1/2 mi.	1.2	15- 25**
Neighborhood	1/2 - 3/4 mi.	.7	5 - 7

* d.n.a.: Does not apply
** 15 acres when adjacent to school; 25 acres when not adjacent

Policy OS 3.2.2: While recreational and park needs are being assessed, the City shall continue to consider acquiring and developing parks and recreational facilities where needs have been identified.

Implementation 1: The City will pursue the provision of the following parks, recreation and cultural facilities, as funding permits and sites are available:

- Neighborhood parks in Centerville, and the neighborhood bounded by Driscoll, Paseo Padre Parkway and Washington (expansion of existing parks may also assist in meeting needs in these areas) and in study areas as appropriate;
- Active-use (i.e., sports fields) parks in industrial and open space areas west of I-880
- A swim/gym complex

- Golf courses
- Cultural arts facility

Implementation 2: Upon completion of the needs assessment and park standards study, adopt priorities for park acquisition and development.

Implementation 3: Proposed park sites, including land to be dedicated under the Quimby Act, should be evaluated as to their usability for park and recreation use. Factors to be considered include location, size, configuration, accessibility, topography, and environmental constraints.

Implementation 4: School parks shall be evaluated to consider whether they are needed for neighborhood parks and open space before their leases expire. In general, the City shall seek to renew existing leases or purchase land when it is for sale.

Implementation 5: Evaluate opportunities for developing parks and recreation facilities on vacant land owned by the City and other public agencies (e.g., school district, flood control district).

Implementation 6: Cooperate with the Fremont Unified School District to increase public use of its swimming pools, gymnasiums, and ball fields and courts when they are not needed for school programs.

Implementation 7: Purchase public agency surplus land, including surplus school property, for park use, when appropriate as determined by the needs assessment and park standards.

Policy OS 3.2.3: Whenever feasible, public park and recreational facilities shall be on publicly owned land.

Policy OS 3.2.4: The City shall strongly support the East Bay Regional Park District's plans for expanding its parks and trails in Fremont.

Implementation 1: Strengthen the City's liaison with the East Bay Regional Park District (EBRPD).

OBJECTIVE OS 3.3: Central Park managed for its long term environmental health and vitality

Policy OS 3.3.1: Central Park development shall be in accordance with a long range master plan that considers the long-term role and function of the park within the city, competing needs and uses for the park, the importance of preserving its natural areas, and the need for areas of active and passive use. Privately owned and operated buildings shall not be permitted in Central Park west of the Southern Pacific railroad tracks.

Implementation 1: Develop a long-range Central Park management plan. The Master Plan shall establish appropriate transitions between Central Park and the Civic Center area adjacent to the park. All buildings should be set back from the boundary between the park and the Civic Center area, with landscaping and other buffering elements between the buildings and the park boundary.

Implementation 2: A BART extension through Central Park shall be trenched, covered and sound insulated under Central Park, at a minimum from Stevenson to Paseo Padre.

OBJECTIVE OS 3.4: Minimum feasible environmental impact of new recreation facilities on their surroundings

Policy OS 3.4.1: Active use facilities shall be developed to minimize impacts on residential neighborhoods.

Implementation 1: Identify areas in the city, such as the industrial area, where active use facilities and night-lit facilities can be located consistent with this policy.

Implementation 2: Site active use facilities in or near existing residential areas so as to minimize impacts to the degree feasible on the adjacent residential neighborhood.

OBJECTIVE OS 3.5: A comprehensive system of trails connecting destinations within Fremont

Policy OS 3.5.1: Develop a system of trails shown on the General Plan trails map, as funding permits. Effort shall be concentrated on trails that link major destinations and are accessible to a large number of people.

Implementation 1: Develop priorities for filling in gaps in the existing trail system. Priorities include a link between Central Park and the Alameda Creek Regional Trail with a bridge at the proposed Alameda Creek Quarries Regional Park; a link from Central Park to Mission San Jose via Mission Creek; and a "Bay to Ridgetop" trail near the southern end of Fremont.

Implementation 2: Develop and apply standards for trails and paths appropriate to their proposed use. Standards should address width, surfaces, signs, safety, and access. In general, major trails should be designed for multiple uses: pedestrians, bicycles and horses.

Implementation 3: Seek citizen input in planning new trails and paths.

Implementation 4: Plan and build trails that connect residential, industrial and commercial areas with nearby regional trails.

Policy 3.5.2: Provide public access to major trails, with appropriate staging areas and parking where feasible. Public access points shown on the General Plan are approximate locations. Specific locations of those access points will be determined as part of project approval and shall be provided in new development. Where access is provided, (either as required or as part of project designs), site and building design adjacent to the access point or trail shall also provide for sufficient privacy and a clear boundary between public access and private uses.

Policy OS 3.5.3: The City shall use a variety of resources in completing its trail system.

Implementation 1: Work with other public agencies to develop paths on existing public rights-of-way, such as creeks, flood control channels, Hetch Hetchy and South Bay Aqueduct rights-of-way, and PG&E power line easements, where needed to close gaps.

Implementation 2: Seek to obtain State and Federal grants to help implement the City's trail system.

Implementation 3: Require new development to dedicate right-of-way for trails where they are indicated on the General Plan map. The location of trails shown in the Hill Area which do not already exist are conceptual. Exact trail locations will be determined when development projects are proposed.

OBJECTIVE OS 3.6: A system of regional trails connecting Fremont with neighboring cities and connecting the hills to the Baylands

Policy OS 3.6.1: The City supports the ABAG Bay Trail, the "Bay Ridge Trail" (East Bay Regional Park District Garin to Mission Peak Trail), Niles Canyon regional trail, and Wildlife Refuge trails.

Implementation 1: Assure sufficient right-of-way and improvements for the ABAG Bay trail along its proposed alignment in Fremont.

Implementation 2: Work with Santa Clara County, the cities of San Jose and Milpitas, and other public agencies to provide a bicycle and pedestrian bridge across Coyote Creek.

Implementation 3: Encourage regional agencies to provide restrooms and parking at trailheads of major regional trails.

Implementation 4: Work with appropriate organizations and agencies including the East Bay Regional Park District, to facilitate the development of the Bay Ridge Trail and Niles Canyon regional trail. The location(s) of these trails on the City's Trails Map is conceptual.

Implementation 5: When evaluating future development throughout the trail corridor, particularly in the Vargas Plateau area, consider opportunities to create staging facilities.

OPEN SPACE (OS) GOAL 4:
Civic open spaces to enhance community identity and the quality of the urban environment

OBJECTIVE OS 4.1: **Preservation of historic civic open spaces, and development of new pedestrian walkways, public plazas and other open spaces in community commercial centers, the Central Business District and at public facilities**

Policy OS 4.1.1: Pleasant outdoor spaces should be provided where people can gather for informal activities and special events. These civic open spaces should be in a variety of sizes, easily accessible, protected from excess sun, wind, and noise, and open to views from outside.

Implementation 1: Inventory, and protect through zoning and other mechanisms, historic civic open spaces used or enjoyed by the public.

Implementation 2: As a part of future Specific Plans or other design and development plans for community commercial districts, include plazas, open spaces and other pedestrian areas appropriate to the size, scale, and type of development.

Implementation 3: Continue to provide public art in or as part of new City buildings and facilities. Consider establishing incentives to encourage the provision of art in publicly accessible portions of private buildings.

OPEN SPACE (OS) GOAL 5: Distinctive gateways and roadway landscaping for Fremont

OBJECTIVE OS 5.1: **Clear identification of Fremont's boundaries with special gateways at all major entrances to the city (this section focuses on man-made gateways; natural gateways are addressed in the Visual Resources section of the Natural Resources Chapter)**

Policy OS 5.1.1: The city's major entrances, including freeway offramps and BART stations, should be clearly marked with signs and landscaping where space permits.

Implementation 1: Develop a gateway at the south entrance to Fremont on I-880 to complete Fremont's open space frame. Encourage developments at the southern entrance to the city at I-880 to incorporate major landscape and design elements to serve this purpose.

Implementation 2: Develop a city entrance sign that can be used at all major city gateways at a size and scale appropriate to the location. Signs should be readable at highway distances and speeds.

Implementation 3: Maintain the existing landscaped entry corridor on Alvarado Boulevard, and create new formal entries, with setbacks and landscaping, at the locations shown on the General Plan map.

Policy OS 5.1.2: Maintain city street standards that call for broad rights-of-way and abundant landscaping.

Implementation 1: Continue to apply the City's standards for right of way improvements to new development.

Implementation 2: Continue to ensure that the landscaped strips between the curbs of streets and private property lines are maintained.

Chapter 7
Public Facilities

INTRODUCTION

Public facilities are the government buildings, libraries, schools, fire stations, pipelines, roads, drainage channels, wells and other physical structures that enable Fremont residents and businesses to receive necessary public utilities and services.

Typically, city government will build most public facilities and provide most services. In Fremont, the need for several of the most basic urban services arose before Fremont became a city. Thus, many services -- water supply, flood control, sewage disposal, and library services -- were, and continue to be, provided by special districts or by Alameda County. Each special district has its own governing board, separate from the City Council. In addition, as in all California cities, the school system is governed by an elected School Board, wholly independent of city government. There is also an independent community college district. Power and telephone services are provided by private companies.

While the City does not plan for or develop many public facilities, under State law, all public facilities, including those proposed by special districts within the City are to be reviewed by the local planning agency for their conformance with the City's General Plan. This General Plan therefore describes public facilities in this Chapter, and establishes goals, objectives, policies and implementation measures related to all public facilities at the end of this Chapter. The following public facilities in Fremont are described:

City Buildings and Facilities
Schools
Water Supply
Flood Control
Sanitary Sewers
Solid Waste
Gas and Electric

Each Chapter section is divided into a description of the setting and projections for the public facility.

Setting

Upon incorporation, Fremont assumed responsibility for providing many public facilities and services. The City has built government and police buildings, branch libraries, parks, and community centers. More recently, Fremont has turned its attention to cultural and educational opportunities for the community. The City has a new main library and is planning a cultural arts center. The City's parks are described in the Open Space Chapter, and fire facilities are discussed in the Health and Safety Chapter. Other public facilities are described below.

Civic Center and City Offices

Fremont's Civic Center is located in the northwest corner of Central Park. In this area is the City Government Building (1969) and Police Services Wing (1971), and the Fremont Main Library (June, 1989). The library houses the administrative offices for the Alameda County library system. The former library and the animal control building are on the perimeter of the Civic Center area.

Both the City administrative offices and the Police Department have outgrown their current locations in the City Government Building and Police Services Wing. Several options are being considered for location of additional space for both police and City administration functions.

Community and Senior Centers

The City has community centers in Central Park, in the Centerville, Los Cerritos, Niles, and Warm Springs community parks, and at the Olive Hyde Art Gallery near Mission San Jose. The auditorium in the Fremont Community Center in Central Park cannot be used because of damage due to slippage from an earthquake fault. The community centers are used for community meetings and recreation programs. The City also has a multi-purpose senior center in Central Park. The center provides health, nutrition, fitness, educational, arts and crafts, and cultural activities and programs.

Libraries

Library services are provided by the Alameda County library system which operates the four public libraries in Fremont: the Main Library in the Civic Center and branch libraries in Centerville, Irvington, and Niles.

The City provides and maintains the library buildings, with the exception of the Niles branch which is located in a building provided by the County before incorporation.

The County library system is administered by the Board of Supervisors, which provides funding for staffing, materials, and equipment through property taxes. A County Library Commission advises the Board on county-wide services, and a Fremont Library Commission, appointed by the City Council, advises the Fremont library staff on local issues.

The Fremont Main Library is the central library for the entire County library system. It is the repository for the bulk of the system's reference materials and has space for 300,000 books. The County bookmobile operates out of the Main Library. Administrative services of the County library system are also housed in the building.

Projections

Civic Center

As discussed in the Setting section, interim plans for housing police and other City personnel are being evaluated. Currently, the seismic safety of the existing City offices and police building is also being evaluated.

A Cultural Arts Center is proposed to be the third major addition to the Civic Center. It would be located west of the Civic Government Building and south of the library. A landscaped Civic Garden, or "commons," would connect the three major elements in the Civic Center. The proposed cultural center would include two theaters, a visual arts gallery and museum, and an outdoor Festival Court.

Community/Senior Centers

The City is planning to build new community centers in Irvington and in the Northern Plains area (no site has been identified), and a combined community/ senior center for Northgate Community Parks. Another multi-purpose senior center is planned for the Warm Springs area. There is also a need for a senior day care facility for the frail elderly, seniors who live at home but require special care in the daytime, including opportunities for social interaction.

Libraries

The City is planning for one more branch library to be located in the Warm Springs area. This library may replace the existing Irvington branch library.

Setting

Fremont Unified School District

Public schools in Fremont are in the Fremont Unified School District governed by a five-member board elected by residents of the City. In 1990, the District had 29 elementary schools, five junior high schools and six high schools. The District's thirtieth elementary school is scheduled to open in 1992. The District also has an adult school and an educational center for American Indian children, and participates in a regional occupational training program. The locations of the District's schools are shown on Planning Area diagrams.

The Fremont Unified School District was created from the merger of five elementary districts and the Washington Union High School District in 1964. In the 1960's the number of students in Fremont's schools grew quickly and then unexpectedly declined in the 1970s, as shown in Table 7-1. The decline resulted from a shrinking average household size and the "baby bust" that followed the baby boom of the 1960's. In the 1980s the school population reached its lowest point and then began to climb again, reflecting the growth in the supply of housing.

The decline in enrollment led to the closure of 12 schools by 1985. Meanwhile enrollment increased in parts of the City where new housing development was occurring. The District opened up two new elementary schools: Ardenwood (1985) and Weibel (1987). The District has sold seven of its closed school sites, but five remain in District ownership. One of them, Marshall, was re-opened in 1988 as "staging" school for overflow children from developing areas of the City such as Ardenwood. Mowry and Noll schools are used for the District's adult school. The American Indian Program is at Linda Vista School. Fremont School is headquarters for the Mission Valley Regional Occupational Program, which provides vocational training for about 2,000 high school students and adults in the Fremont, Newark, and New Haven (Union City) school districts.

Existing Needs. The fluctuation in school enrollment and inadequate funding for new facilities have complicated planning for schools in Fremont. Portable classrooms have become a necessity as the District tries to accommodate students at their neighborhood schools. Despite these efforts, about 4,000 students are bused to school daily (1990). Major repairs are needed in classrooms and other facilities.

Table 7-1
September School Enrollment, 1963 - 1989

	Year	Enrollment
	1963	23,311
	1966	30,310
	1969	32,354
	1972	32,916
	1975	31,375
	1978	27,723
	1981	25,255
	1984	24,609
	1987	26,043
	1989	26,831
Projected:	2005	35,565

*Source: Fremont Unified School District

Until the passage of Proposition 13 and the requirement for a two-thirds majority vote, new schools were financed through bond issues. Now the District must rely on other funding sources. Four schools were built with State or Federal funds because of circumstances unique to each school. Beginning in 1978, the City assessed a fee against new residential development to pay for school construction. After State enabling legislation was enacted in 1987, the District began assessing the fee. Ardenwood and Weibel Schools, are financed substantially by developer fees, and an additional school is planned for Ardenwood. The School District has indicated that developer fees do not pay for the cost of providing new instructional facilities.

Ohlone College

Ohlone College is a two-year community college with a 1989 enrollment of almost 10,000 students. About 40 percent are daytime students, 40 percent are evening students, and the remainder attend both day and evening classes. About half of the students are over age 25. The college is in the Fremont-Newark Community College District, which is governed by a seven-person elected board of trustees (five from Fremont, two from Newark). There are no four-year colleges or educational programs in Fremont at this time, although University of California has offered extension classes in Fremont.

California Schools for the Deaf and for the Blind

The State of California operates two special schools in Fremont: the School for the Deaf and the School for the Blind. The School for the Deaf has about 475 students from pre-school through high school. The school serves northern California, and about 70 percent of the students live on campus

during the week. The School for the Blind has about 100 students in grades kindergarten through 12. About 70 percent of them also live on campus. It is the only public school for the blind in the State.

Private Schools

Although private schools are not "public facilities," they do provide educational services to some of the children of Fremont. Fremont has seven private schools (excluding private kindergartens) with an enrollment of 2,285 students. With one exception, these schools do not extend beyond eighth grade. The location of existing public schools is shown on Figure 9-7, Sensive Receptors, in the Natural Resources Chapter.

Projections

Fremont Unified School District

The District has projected its enrollment will increase to 35,565 by 2005. About 75 percent of the increase is expected to be generated by new housing development. Twenty-five percent of the projected increase is expected to come from an increase in the average number of students per household throughout the District as a result of an increasing birth rate. The increase is attributable to the temporarily higher birth rate associated with the baby boom generation. To respond to this demand the School District is planning to build at least one more elementary school (in the Ardenwood area), and will consider the development of another in the southern hill area, depending on how much residential development occurs there. This General Plan also calls for increased residential development in some of the older sections of the City which may affect existing schools. New schools and/or additions to existing facilities will be required to address expected school needs in the next twenty years. However, one or more school sites may become surplus and may therefore be sold for private development.

Ohlone College and Post-Secondary Education

Enrollment at Ohlone College has been an increasing at a rate of two to three percent per year. The college is planning a new performing arts building for academic programs and additional classroom space in its present location. It is also considering opening another campus within the District, perhaps in the Northern Plain area. The City's Telesis Strategic Plan (1989) identified a need for additional post-secondary education opportunities in Fremont.

Private Schools

The expansion or location of any new private schools or closure of existing schools is based on market forces. There are no government constraints to the expansion or location of these facilities. However, such expansion, location or reuse of school property must be compatible with adjacent land uses.

Setting

The Alameda County Water District (ACWD), founded in 1914, includes Fremont, Newark, and Union City and is governed by a five-member board of directors elected at large. The elements of the system are described below.

Water Supply

The City's water supply comes from network that receives water from several sources, some of which it stores and some of which it treats and distributes directly to the public. In 1988-89, under drought conditions, the Water District's supply of 48,300 acre feet was received from three main sources:

- State Water Project: 31,300 acre-feet (65 percent). This water originates in other parts of the state and is pumped from the Sacramento/San Joaquin Delta and through the South Bay Aqueduct, or is released from the Del Valle Reservoir. Some of this water is treated and sent to customers, while the bulk is released into Alameda Creek and is used to "recharge" the City's underground aquifer where it is stored for later use.

- San Francisco Water Department: 10,000 acre-feet (20 percent). Most of this water originates in the Sierras and is transported from the Hetch Hetchy Reservoir in Yosemite National Park. A portion of the water originates in Alameda Creek watershed, stored in the Calaveras and San Antonio Reservoirs.

- Local run-off and groundwater: 7,000 acre-feet (15 percent). Only a portion of local run-off is actually captured for use in the City's water supply. Natural run-off enters Alameda Creek and percolates into the City's underground aquifer.

Distribution

Fifty percent of the water delivered to customers is pumped from the City's natural aquifer, the Niles Cone. The aquifer acts as a huge reservoir. Water percolates into the aquifer through the creek bed, or through the ponds of the Alameda Creek Quarries. As noted above, water is brought into these storage areas from natural run-off and through releases from the State Water project. The District pumps out water from wells sunk into the aquifer, treats the water and distributes it to customers. Before water was imported, more water was taken from the aquifer than was replaced through percolation from normal rainfall. Because the Cone extends under the Bay, the drawing down of freshwater water allowed salt water to intrude from the Bay, a process the District is now working to reverse.

Thirty percent of the water distributed to customers is supplied directly from the San Francisco Water Department, and twenty percent is supplied directly from the State Water project sources.

Water Quality and Treatment

The California Department of Health Services sets standards and regulates water quality. Analyses conducted by the Water District indicate that its water meets all health and aesthetic standards for California drinking water supplies. Water treatment varies, depending on its origin. The Water District fluoridates all water at the points where it enters its distribution system.

Present Service

The Alameda County Water District has 68,000 service connections and supplies water to about 265,000 (1990) people in the three cities it serves. Almost three-fourths (73 percent) of the water goes to residential use, 10 percent to commercial uses, 10 percent to industrial uses, and 7 percent to institutions.

The District has an active conservation program to obtain voluntary reduction in water use. The program includes education, provision of water conservation kits, and encouragement of drought tolerant landscaping.

Projections

Future water demand is based on the size of the service area, the number of people served, land use within the service area, and development trends.

Service Area

The Water District has a service area of approximately 97 square miles within Fremont, Newark, and Union City. Development in the Fremont and Union City hill areas could lead to expansion of the District's service area and facilities.

Number of People Served

Residential development uses the greatest share of District water. A 1986 District study estimated that, between 1980 and 2010, the population of the service area would increase to 293,500. In 1989, the Association of Bay Area Governments (ABAG) projected that the three cities would grow to 313,400 by 2005, about 20,000 more people than previously projected by the District for 2010. The water District plans to review its projections and plans based on more current projections.

Land Use and Development Trends

The District's 1986 study showed that the amount of land in commercial, industrial, and irrigated open space (notably parks) use would climb steadily, while agricultural uses (irrigated farmland) would decline. A ten-fold increase in acreage devoted to high tech uses was also projected. High tech development manufacturing tends to use significantly more water per acre than other categories of industrial or commercial land use. More recent projections prepared by the Fremont Community Development Department show a slower rate of industrial growth and a smaller share in high tech uses than the Water District projected. Potential development in Fremont's Hill Area (see Land Use Chapter) would have a significant impact on the demand for water.

Water Demand and Supply

The District projects a 2010 demand for 60.1 million gallons per day, as shown in Table 7-2.

Table 7-2
Projected District Water Demand
(million gallons/day)

Year	1990	1995	2000	2010
Residential	26.5	28.2	29.1	29.3
Commercial	4.5	5.1	5.5	5.7
Industrial				
High tech	6.6	13.8	15.2	15.2
General	1.2	1.5	1.6	1.7
Irrigated*	3.7	3.4	3.3	3.3
Schools	0.4	0.4	0.4	0.4
Unaccounted**	3.4	4.2	4.4	4.5
Total Demand	46.3	56.6	59.5	60.1

Source: Alameda County Water District (1986 Supply and Facilities Planning Study)

* Irrigated: Open space, agriculture, parks, etc.

** Unaccounted: Authorized un-metered use (i.e., fire fighting, hydrant, and pipeline flushing, etc.) and system losses (faulty meters and leaks).

Based on its 1986 projections, by 2010 the District will need an average of 61 million gallons (67,000 acre-feet) of water per year, plus 6,800 acre-feet per year, when available, for aquifer reclamation and salinity barrier pumping. The Water District has outlined a series of facilities improvements that will enable it to obtain the full amount of water from its present suppliers, except

during drought years. Reductions in demand of 8 to 40 percent may be required in dry years (estimated to occur about once every eight years).

Table 7-3 shows the current maximum supply of water that the District can obtain from its suppliers in the future, assuming facilities improvements.

Table 7-3
Future Water Supplies

San Francisco Water Department	13,400 acre feet	19 percent
State Water Project	42,000 acre feet	58 percent
Local (groundwater and runoff)	17,000 acre feet	23 percent
TOTAL	72,400 acre feet	

Although the SWP entitlement will be available in most years, receipt of the maximum 42,000 acre-feet of water in dry years depends on physical, environmental and political factors. The most significant physical factor is whether additional water transfer facilities will be built. Various alternatives to increase the output of the State Water Project are being considered since defeat of the Peripheral Canal in a Statewide referendum in 1982. Other factors include the environmental impacts of additional freshwater transfers on Bay water quality.

District facilities planned to meet future water needs include a new water treatment plant (1993) and additional production wells. Consideration could be given to the use of reclaimed water for irrigation and some industrial processes in order to conserve potable water.

FLOOD CONTROL

Setting

Primary responsibility for flood control in Fremont lies with the Alameda County Flood Control and Water Conservation District, founded in 1949 to address potential flooding in this urbanizing area of the County.

The District is divided into 10 zones; Fremont is in zones 5 and 6 (zone 5 also includes Newark and part of Union City.) Although it has a separate funding source, the District functions as an arm of the Alameda County Public Works Department.

Since the 1950s, Fremont's eight smaller creeks have been greatly altered by flood control projects. Instead of meandering as they once did, they flow across the Bay plain in relatively straight channels. Vegetation is kept to a minimum to enhance the flow of flood waters, and access is restricted by chain link fences.

The District is currently working on improvements needed to meet 100-year flood standards. A 100-year flood is the magnitude of flooding expected to occur on the average of once every 100 years, based on historical data. The proposed improvements include raising levees, enlarging culverts and pipes, installing tidegates and fencing, and other projects.

Historically, Alameda Creek has been the major source of flooding in Fremont. By 1965, Creek channel improvements by the U.S. Army Corps of Engineers and dams on Creek tributaries were estimated to have reduced the threat of flooding to less than once ever 100-years. Areas in the Northern Plains and Niles once subject to almost annual flooding have now been developed.

City Responsibilities for Flood Control

The City has responsibility for ensuring that adequate storm drain facilities are built into new development. Since much of Fremont's development is relatively recent, the system is in fairly good condition. The City corrects existing localized flooding problems and is responsible for maintaining the system.

Coordination Between Fremont and the Flood Control District

The Flood Control District and the City of Fremont work together in several areas. The City Engineer helps the District decide which of its planned flood control projects should be undertaken each year. The District reviews development projects for the City, including subdivisions, use permits, and planned districts. If a proposed new development drains into, or crosses, one of the flood control channels, the District has direct authority and must issue a permit for the project to proceed.

The City and the Flood Control District also work in partnership to manage Lake Elizabeth and the adjacent silt pond. The lake was created by the District for flood control purposes, but the City manages the Lake for recreational use. The Flood Control District and the City have also collaborated on the development of trails along some segments of Mission Creek.

Projections

Most major flooding problems in the flatlands have been corrected. As urban development reaches further into the hill area, the District will face new challenges in attempting to provide adequate protection from flooding while preserving the natural beauty and other open space values (wildlife habitats, vegetation) of the creeks. Hill area development could also potentially increase downstream flows and siltation, thereby affecting flood control structures in the flatlands area.

SANITARY SEWERS

Setting

The Union Sanitary District (USD) provides wastewater collection, treatment, and disposal services to residents of Fremont, Newark, and Union City. It is governed by a five-member board, with three directors elected by the residents of Fremont and one each by Newark and Union City.

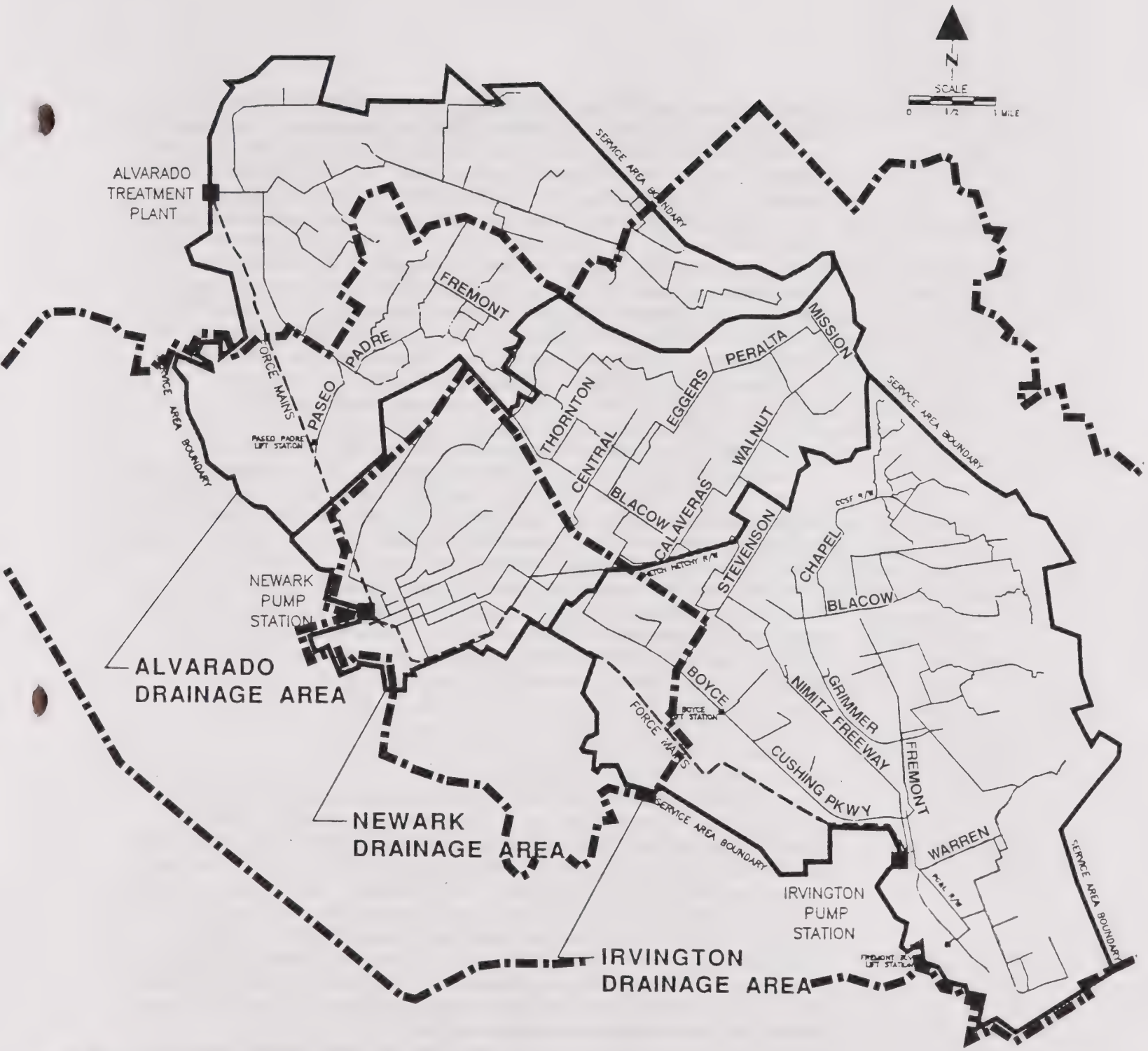
The District was formed in 1918 to serve Newark and the Centerville area of what is now Fremont. By 1962, Niles, Decoto, Irvington, and Alvarado Sanitary Districts had joined the Union Sanitary District. The District covers most of Fremont, except for a large part of the Hill Area and a number of small parcels of land in the flatlands. Parcels will be annexed to the District as development occurs requiring sewer service.

The Union Sanitary District is a member of the East Bay Dischargers Authority (EBDA), a joint powers agency formed in 1974 to plan, construct, and operate a regional water quality management program and facilities. EBDA has five member agencies.

Collection and Transport

The Union Sanitary District gravity wastewater collection system consists of 688 miles of trunk lines and smaller sewers, which in 1989 accommodated an average flow of 24 million gallons a day. Over 90 percent of the system was built after 1950 and is in relatively good structural condition. Most pipes are made of vitrified clay and polyvinyl chloride. The largest trunk sewers are reinforced concrete.

The sewer system is divided into three separate drainage areas -- Irvington, Newark, and Alvarado -- each flowing to a major pump station near the Bay (see Figure 7-1). The drainage areas do not correspond to city boundaries; parts of Fremont are in all three.



Source: Union Sanitary District Master Plan 9/89

FREMONT GENERAL PLAN

MAJOR WASTEWATER COLLECTION AND RAW WASTEWATER TRANSPORT SYSTEM FACILITIES

FIGURE 7-1

A 1989 study of the District showed that wastewater flows in some sewer lines exceed design capacities. Most of the significant capacity shortages are in the Centerville Planning Area. The previous General Plan designated the affected area as a "Sewer Service Impacted Area." In 1979, the City Council adopted a policy regarding residential development "opposing development of any lands served by the Norris Road and Paseo Padre trunk sewers at a level above Step 1." The policy says higher densities will be allowed only if density is reduced on another property in the area. If the City does not monitor and control densities, it is the District's policy to issue permits on a first come, first served basis until the line is at capacity. The Master Plan showed that there are sewer lines which have insufficient capacity. In 1990, the District started a Capital Improvement Program to correct these sewer lines; however, apart from those in Centerville, the sewer lines with insufficient capacity should not pose constraints on development.

The District's transport system is composed of pump stations and force mains (parallel pipes) that carry flows collected from the three drainage areas to the Alvarado Treatment Plant in Union City. The transport system is in relatively good condition with the exception of the Boyce Lift Station which needs to be replaced. Also, if one of the two parallel pipes in the force mains is out of service, the transport system cannot handle existing peak wet weather flows. There is capacity in the transport system to allow normal and scheduled maintenance operation through 2010, but not to allow emergency repair service even under 1990 flows. Also, the system cannot be used to transport reclaimed water (treated effluent) back to the communities that are served, as was originally planned.

Treatment and Discharge

Union Sanitary District provides sewer service to an area which includes Union City, Fremont and Newark from its Alvarado Treatment Plant on Benson Road in Uion City. Under the plant's use permit, which was issued by the City of Union City, the plant has a permitted capacity of 35 million gallons per day (mgd). The Regional Water Quality Control Board permit for the plant allows flows of 24.2 mgd. Actual plant capacity is currently 29 mgd, and current dry weather flows are between 23 and 24 mgd. The plant currently uses a system with a rotating biological contractor (RBC) to treat sewage. This system is planned to be replaced with an activated sludge technology which will increase plant capacity to 35 mgd. While this change takes place, plant capacity will be reduced to 21 mgd, and additional capascity will be created to meet existing demand on an interim basis.

Odor control scrubbers added to the treatment plant in 1986 have effectively eliminated initial complaints and the plant is in compliance with all Bay Area air quality standards.

After the wastewater is treated, it is pumped into the East Bay Dischargers Authority outflow pipe and carried out into the Bay north of the San Mateo Bridge. Along with other member agencies, the Union Sanitary District pays a proportionate share of the operation and maintenance costs of EBDA facilities. USD is entitled to a capacity allocation of 42.9 mgd. Some of the

EBDA capacity has been leased to the Livermore-Amador Valley Water Management Agency.

Projections

USD projected future sewer service needs as part of a 1989 Sewer Master Plan study. The study included areas currently served by the District, as well as areas that may potentially be served by the District (the three cities' "spheres of influence"). Population and land use projections were made to estimate the potential demand for service. Projections were based on the then current General Plans and 1987 projections by the Association of Bay Area Governments. More recent ABAG projections (1990) indicate slightly higher employment growth and 12,200 more residents than previous projections for the year 2005. The District expects to be able to accommodate these higher projections.

However, other variables could affect the District's planning. For example, conversion of industrial land to residential use or the redevelopment of commercial land to more intensive uses may increase wastewater flows. A higher proportion of high tech uses, such as semiconductor manufacturers, that use more water than traditional industrial uses would also increase sewer flows. Development in the Union City and Fremont hill areas would also have implications for USD services. Possible development in the Union City hills would leave very little excess capacity in the main trunk sewer along Alvarado-Niles Boulevard, affecting portions of Fremont. Significant development in the Fremont hills would also affect capacity in the collection system and may require additional treatment capacity. These issues would need to be addressed as part of any planning study for the Fremont hills, called for in this Plan.

Union Sanitary District updates land uses for specific areas prior to design of District projects to serve those areas.

Planned Improvements

The 1989 Master Plan Study identified the major projects needed to meet the projected demand. The District has a capital improvement program to complete the most critically needed projects by 1995. Most of the work identified in the five-year plan is in the collection rather than the transport system. The program includes the capacity improvements needed to development at the higher end of the density range in the Centerville area. Although the District has planned improvements that will eventually increase capacity in the impacted area in Centerville, the General Plan will continue to show the sewer impact area until further notice from the District.

Other areas with inadequate capacities include Central Avenue, along I-880 south of Durham Road; Fremont Boulevard, from Washington Boulevard to Blacow Road and Mowry Avenue, from Mission Boulevard to Blacow Road.

The District is initiating a District-wide Master Plan which will provide a comprehensive plan for implementing improvements to the collection and transport systems, sludge disposal, water reclamation and treatment of flows beyond 35 mgd. A joint study between USD and ACWD is being performed to identify potential reclaimed water projects within the Tri-Cities.

SOLID WASTE

Setting

The Oakland Scavenger Company (a subsidiary of Waste Management, Inc.) collects Fremont's garbage and takes it to a large land fill located at the western terminus of Durham Road. Garbage from Newark and Union City is also buried at the Durham Road Landfill. The Durham Road Land Fill will eventually cover about 225 acres of a 371-acre parcel. The southeast perimeter of the parcel is wetlands and will remain undisturbed.

By about 1992, the first 108 acres will be filled. Oakland Scavenger will then begin filling another 117 acres to the south and east of the present operation. Operation of the Durham Road Landfill is subject to numerous government reviews and permits. The City of Fremont exercises control through a Conditional Use Permit which was updated in 1981 to allow the 117-acre expansion and an eventual 100-foot height for the landfill.

Recycling

In April 1989, Fremont, Newark and Union City instituted a curbside recycling program in single-family neighborhoods, which diverts about three percent of the City's solid waste (1990). Glass, metal, newspapers, certain kinds of plastic containers, and used oil are collected. The Scavenger Company also buys cans and glass at its "buy-back" center at the Durham Road Landfill.

In 1989, the State passed legislation that requires cities and counties to reduce their solid waste stream by 25 percent by 1995, and by 50 percent by 2000. To demonstrate how it will reach this goal, each city is to prepare a source reduction and recycling plan for incorporation into a County Integrated Waste Management Plan. Fremont has established a Recycling Advisory Committee to develop a plan for City Council consideration. The committee is considering a broad range of tools to reduce solid waste including:

- Educational campaigns, price incentives and potential restrictions to reduce use of non-recyclable products;
- Recycling programs for businesses and schools and expanded recycling facilities;

- Special seasonal collection programs (Christmas trees, telephone books);
- Public agency purchase of recycled products; and
- Incentives to encourage markets for collected recyclable commodities.

Projections

Depending on growth in the Tri-cities area and the success of recycling programs, the landfill is expected to reach capacity in 9 to 21 years. An additional 3 - 5 years may be added to the life of the landfill if 31 acres of potential wetlands on the northeast corner can be used for filling.

Recycling programs are being expanded to multi-family housing and to commercial development. There are also plans to open a yard waste composting and wood recycling facility (a "green waste" facility).

When the landfill closes, the site will be capped in accordance with specific health and safety requirements. Once the landfill is closed, Fremont anticipates its garbage will be transported to the Altamont Landfill, seven miles northeast of Livermore. Waste Management, Inc. has begun the process of obtaining a County conditional use permit to expand that land fill from 273 to 1600 acres which would add 100 to 125 years of capacity. Alternative land fill sites may be available in the future.

Garbage collected in Fremont will be transferred from refuse trucks to larger transports at a refuse transfer station. A transfer station site will be needed to accommodate the transfer facilities, a green waste composting facility and a full-scale materials recovery facility for separating recyclable materials. These facilities should be located on or near the present landfill parcel and could require 60 to 70 acres of land.

GAS, ELECTRIC AND TELEPHONE SERVICE

Setting

Power and telephone service are provided by highly regulated private companies. Pacific Gas & Electric Company (PG&E) supplies electric and gas service to Fremont. Power is generated from various sources, including fossil fuel, hydroelectric, nuclear, wind, and geothermal plants and fed into a large grid system serving Northern California. PG&E brings electric power into Fremont on overhead transmission lines crossing the City from east to west in an alignment approximately parallel with Durham Road. One set of power lines carries power from the Hetch Hetchy hydroelectric plant in the Sierra Nevada. These high voltage lines feed into the Newark substation

west of I-880 at Durham and Boyce Roads. The Fremont Substation (Paseo Padre Parkway and Grimmer Roads) and the Jarvis substation on Decoto Road in Union City also serve Fremont. Power is stepped down at the two substations and fed into supply lines throughout the City.

Power lines serving new development are being placed in underground conduits, although on-site transformers are often above-ground and visible. Power lines in older areas of the City are still on poles. PG&E has an ongoing program to underground the lines. Criteria used to prioritize undergrounding include the ability to coordinate with other street improvements, the cost of undergrounding, location along major thoroughfares, and financial support from neighboring property owners for related improvements. Many remaining overhead powerlines are in backyard easements, making maintenance, especially tree trimming, very difficult.

The main transmission line for natural gas parallels the Nimitz Freeway, with a major pumping station located near I-880 and Durham Road. Gas distribution lines branch off from the main line. Several major PG&E facilities serving Fremont, Newark, and Union City, are located near the intersection of Durham and Boyce Roads, including the Newark substation, a large materials warehouse, a gas meter repair shop, and a service center. A customer service office is also located in Fremont. Telephone service is provided by Pacific Bell Telephone Company.

Projections

PG&E contemplates no major changes in electric and gas service to Fremont. It has sufficient supplies to meet the future needs of the City. Pacific Bell anticipates no difficulties in meeting telephone service needs within the City.

Goals, Objectives, Policies and Implementation

Fundamental Goals

One **Fundamental Goal** relates directly to the provision of public facilities:

F 10: PUBLIC SERVICES RESPONSIBLY MANAGED AND EQUITABLY DISTRIBUTED THROUGHOUT THE CITY

Public Facilities Goals

To achieve this goal, the following **public facility goals**, objectives, policies and implementation measures are adopted, divided into sections for each type of public facility. No goals, policies or implementation measures are considered necessary for gas, electric and telephone service.

GOAL PF 1: A range of public facilities and services to meet the health, safety, leisure, cultural, and general government needs of all Fremont residents

GOAL PF 2: Support the Fremont Unified School District and other educational institutions to provide quality education to the children and adults of Fremont

GOAL PF 3: Water, sewer, and flood control systems designed to serve the level of development contemplated in the General Plan

GOAL PF 4: A comprehensive solid waste management plan, with recycling as a key component

PUBLIC FACILITIES (PF) GOAL 1:
A range of public facilities and services to meet the health, safety, leisure, cultural, and general government needs of all Fremont residents

OBJECTIVE PF 1.1: **A Civic Center for Fremont's general government offices to provide better service to the public and improve efficiency. Such a Civic Center could be located in its present location or in the Central Business District.**

Policy PF 1.1.1: Centralize and consolidate the City's general government offices.

Implementation 1: Analyze alternative locations for City government offices and construct the proposed facility. Consider the Civic Center area or the Central Business District.

Implementation 2: Analyze alternative locations for a police building. A police building could be located within the proposed Civic Center or Central Business District.

OBJECTIVE PF 1.2: **Library, cultural and leisure facilities to serve a variety of age and interest groups.**

Policy PF 1.2.1: Develop cultural arts facilities to meet the growing cultural needs of the community.

Implementation 1: Design and build a Cultural Arts Center that could include theaters, an art gallery, and a museum.

Policy PF 1.2.2: Provide community and senior centers and libraries in geographically dispersed locations.

Implementation 1: Provide a library building in the Warm Springs area.

Implementation 2: Build a second senior center.

Implementation 3: Provide community centers in all community parks.

PUBLIC FACILITIES (PF) GOAL 2:
Support the Fremont Unified School District and other educational institutions to provide quality education to the children and adults of Fremont

OBJECTIVE PF 2.1: **Assistance to the Fremont Unified School District in meeting future educational needs.**

Policy PF 2.1.1: Cooperate with the school District in its efforts to make enrollment projections.

Implementation 1: Provide the Fremont Unified School District with continually updated information on planned new housing and development trends.

Implementation 2: Work with school district to ensure future school locations are convenient and compatible with surrounding uses.

Implementation 3: Work with the School District to determine long term need and uses for school sites.

Policy PF 2.1.2: Continue to work with the School District to ensure school impact fees are collected in a timely manner.

Implementation 1: Issue building permits for new construction only after developers have paid the required development fees for school construction to the school District.

OBJECTIVE PF 2.2: **Expanded opportunities for post-secondary education in Fremont.**

Policy 2.2.1: Continue to work with the Ohlone College District, the State University system, the University of California and private colleges to

provide sufficient educational facilities for post-secondary education.

Implementation 1: Work with Ohlone College, State Colleges and the University of California to identify locations for post-secondary education classes and or a cooperative center in Fremont. Work with these organizations to expand the range of post-secondary educational opportunities available in Fremont.

PUBLIC FACILITIES (PF) GOAL 3:
Water, sewer, and flood control systems designed to serve the level of development contemplated in the General Plan

OBJECTIVE PF 3.1: **Cooperation with the Water, Sewer, and Flood Control Districts in planning for service needs and facilities in Fremont.**

Policy PF 3.1.1: Encourage the Alameda County Water District, the Union Sanitary District, and the Alameda County Flood Control and Water Conservation District to use the Fremont General Plan to plan for new facilities in Fremont.

Implementation 1: Annually review capital improvement programs for the water, sewer, and flood control districts for consistency with the Fremont General Plan. Assist the districts in establishing priorities for projects in Fremont.

Implementation 2: Ensure that the Water, Sewer, and Flood Control Districts are given the opportunity to review and comment on all major development projects.

Implementation 3: Work with the Alameda County Flood Control District to develop flood control measures that provide protection from flooding while preserving natural plant formations and natural topographic features.

Implementation 4: Periodically review land uses and practices to refine water conservation measures.

Policy PF 3.1.2: Limit development in areas where the sewage collection system is known to have insufficient capacity.

Implementation 1: In areas identified as having insufficient sewer capacity, allow development above Step 1 only if it can be demonstrated that

density will be commensurately reduced elsewhere within the sewer impacted area. Continue this measure until USD informs the City that the capacity problems have been corrected.

Policy PF 3.1.3: Work with the Sanitary District to identify ways to use reclaimed water, consistent with protection of the environment and public health.

PUBLIC FACILITIES (PF) GOAL 4:
A comprehensive solid waste management plan, with recycling as a key component

OBJECTIVE PF 4.1: **Diversion of 25 percent of the City's solid waste stream from the landfill by 1995, and diversion of 50 percent by 2000.**

Policy PF 4.1.2: Implement a variety of waste reduction and recycling programs to achieve the 1995 and 2000 reduction objectives, in cooperation with the local disposal company as well as the County Waste Management Authority.

Implementation 1: Undertake educational programs to increase residents' and workers' awareness of the need to reduce solid waste.

Implementation 2: Establish curb-side or on-site recycling programs for all residential, commercial, industrial, and institutional uses in Fremont.

Implementation 3: Establish educational programs, or institute mandatory measures if needed, to reduce the amount of non-recyclable or toxic materials purchased or consumed in Fremont.

Implementation 4: Promote the use of goods containing recycled materials through City purchasing policies and other efforts.

OBJECTIVE PF 4.2: **Provision of a long-range solid waste disposal site.**

Policy PF 4.2.1: Ensure that the City has an alternative solid waste disposal site when the Durham Road Landfill closes.

Implementation 1: Work with Alameda County and private companies to assess the environmental and economic feasibility of alternative landfill sites.

Implementation 2: In cooperation with the City's garbage collection provider, identify a location in Fremont for a future refuse transfer and recycling center, including yard waste, composting and wood recycling (green waste), near or at the existing landfill.

Chapter 8
Transportation Chapter

INTRODUCTION

Like most suburban communities, Fremont's transportation system and pattern of land development were planned around the use of the automobile. Almost all daily transportation needs in Fremont are met by automobile or truck.

The automobile provides a degree of mobility, comfort and convenience unmatched by other modes of transportation. But while automobiles provide benefits, they also have significant costs. Roads are becoming congested, and the high costs (both environmental and monetary) of building new roads are becoming prohibitive. These are the dilemmas facing every Bay Area city devising transportation strategies for the 21st Century.

In the first section of this Chapter Fremont's current transportation system is described. In the second section projections and assumptions about Fremont's transportation future are presented. Finally, the third section shows how Fremont will address its transportation needs over the next two decades.

The setting and projection sections are summaries of the Transportation Background Report which provides additional detail and technical information supporting this Chapter.

SETTING

Fremont's transportation system is composed of all of the elements by which goods and people are moved through and to it: the City's roads, trains, bus systems, bicycle and pedestrian ways.

Demand for Transportation

Most people meet their daily needs within a relatively short distance of their work or home. Problems in the transportation network generally occur during the peak hours of travel demand when people are commuting to and from work, generally between 7 - 9 AM and 4 - 6 PM. An evaluation of commute patterns is one means to assess the "demand" for transportation services such as roads and transit.

Commute to Work

In 1980, when information was last gathered (1980 Census), almost 95 percent of workers in the Tri-City area (Fremont, Newark, Union City) commuted to work by auto. Only 1.5 percent used transit, and a little less than 4 percent used other means.

Figure 8-1 shows where residents of the Tri-City area worked in 1980 (Source: U.S. Census). Because Fremont has many more workers living here than jobs, the largest travel demand at peak hours is on the regional transportation network going to or from major job centers throughout the region. In 1980, 36% of Tri-City residents worked within the Tri-City area, while 18% worked elsewhere in Southern Alameda County and 19% in San Jose or Silicon Valley.

Figure 8-2 shows where people working in the Tri-City area lived in 1980. An unusually high proportion of Tri-City area jobs (64%) were filled by Tri-City residents and another fourteen percent by persons living elsewhere in Southern Alameda County. These statistics suggest that Fremont job holders tend to locate near their work, reducing the long-distance commuting associated with other job centers in the region.

Roadway Network

Roadway Classification

Streets in Fremont are classified into five major types, based on their primary function. Typical cross-sections of each type of street (with the exception of freeways) are presented in Figure 8-3.

Freeway. These are high speed, high capacity facilities with grade separated intersections intended to meet the need for longer trips. Freeways are under the jurisdiction of the State Department of Transportation (CALTRANS).

Expressways. An expressway is similar to an arterial except that it has no or very few private driveways and grade separated intersections are not uncommon. All expressways have medians dividing opposing traffic. No expressway currently exists in Fremont.

Arterials. Arterials are high capacity local facilities which meet the demand for longer, through trips within a community. Since movement, not access, is the primary function of an arterial, controlling access is important. Too much access tends to reduce the capacity of a facility. Arterials may be divided by a median, or undivided and typically have two or three lanes in each direction.

Where TriCities Residents Worked (1980)

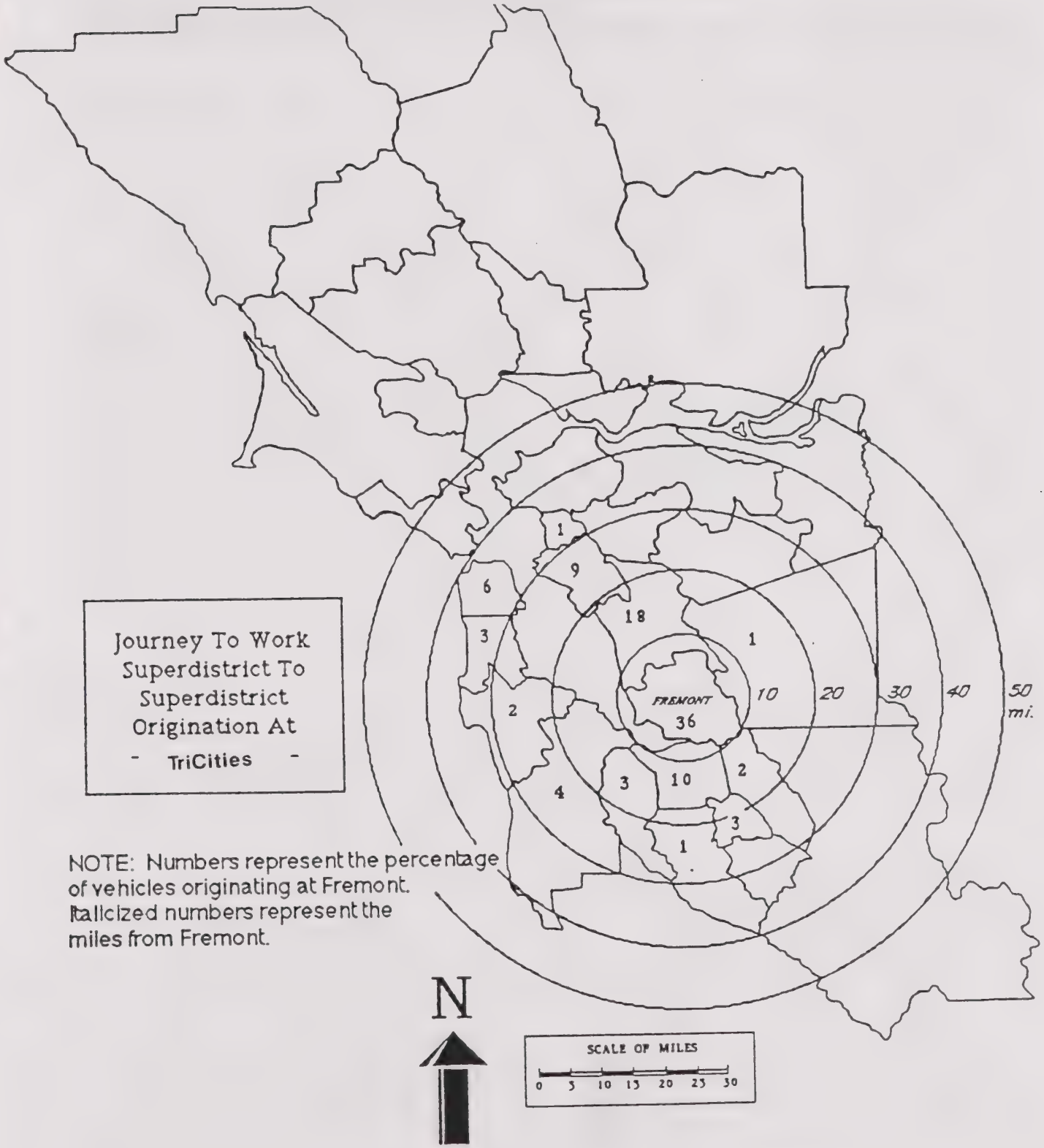


Figure 8-1

Source: Metropolitan Transportation Commission, Travel Characteristics, Appendix 6.0, Working Paper 8, October 1983

Where TriCities Workers Lived (1980)

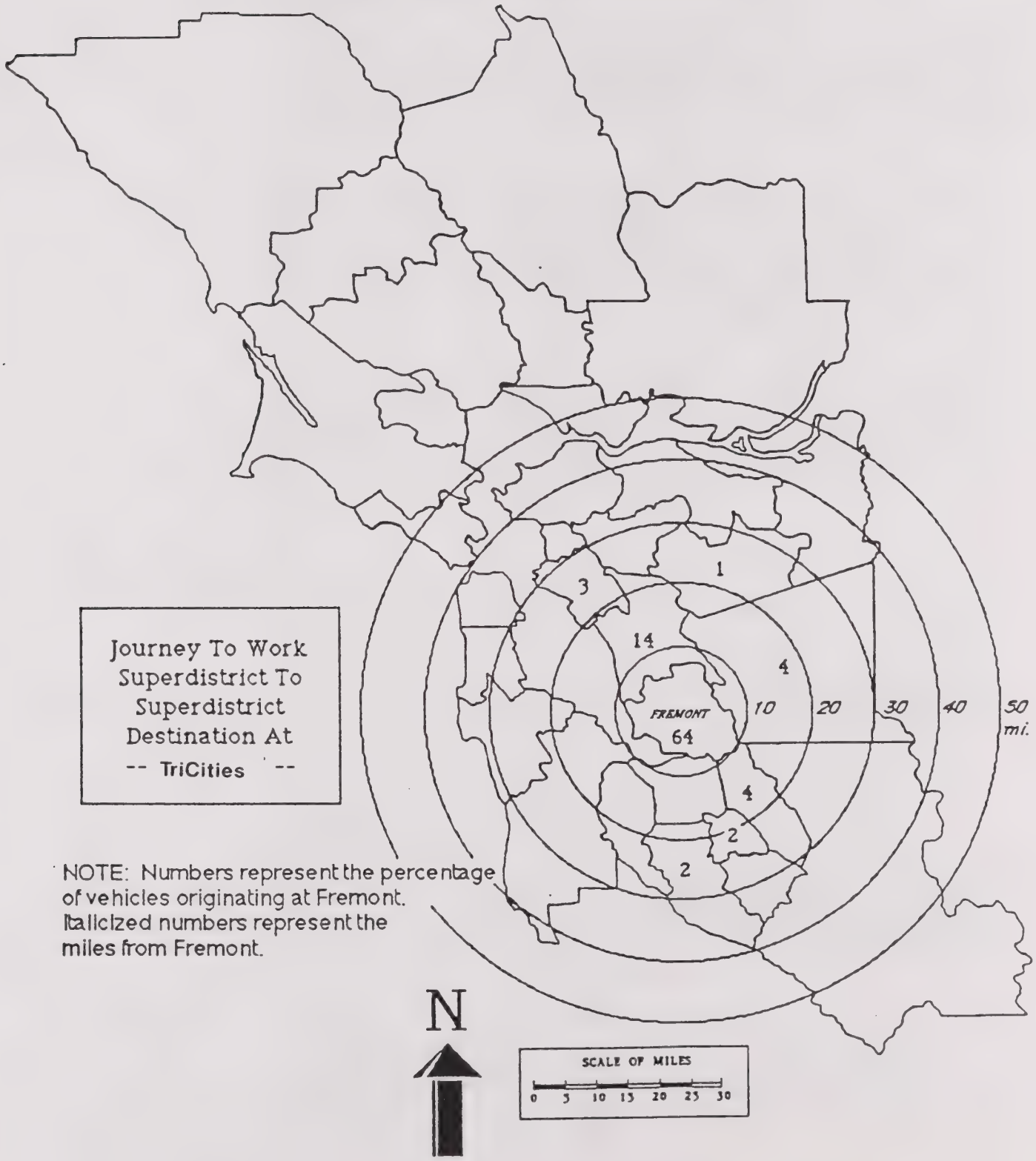
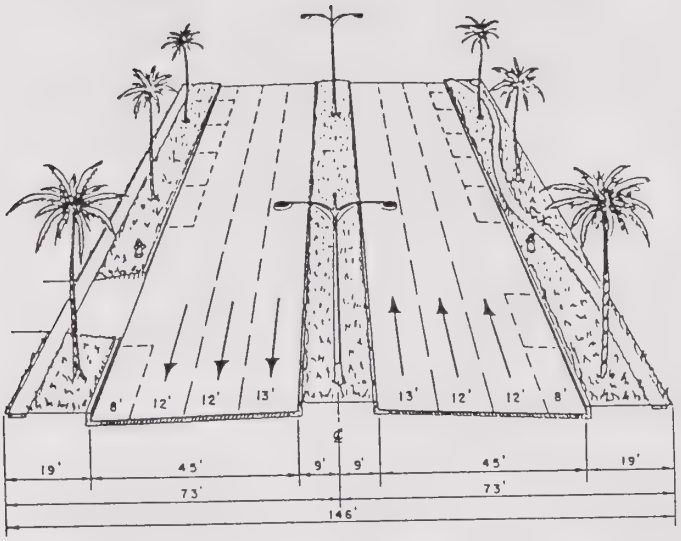


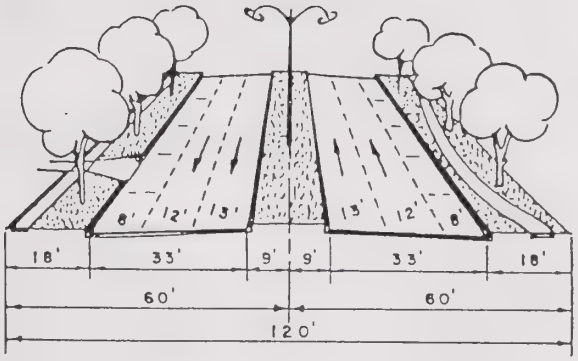
Figure 8-2

Source: Metropolitan Transportation Commission, Travel Characteristics, Appendix 6.0, Working Paper 8, October 1983

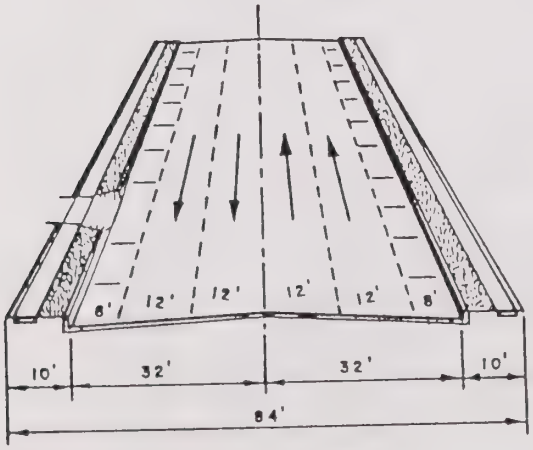
TYPICAL STREET CROSS SECTIONS

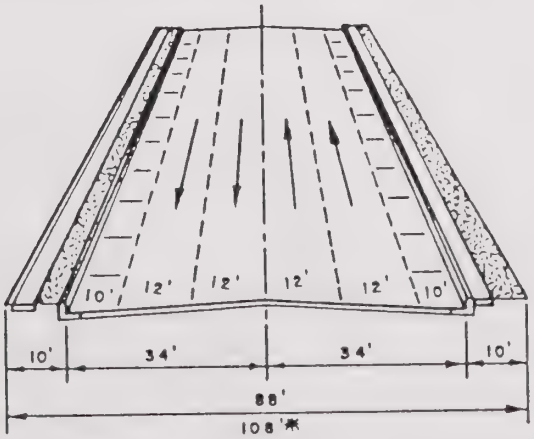
Parkway





Undivided Arterial





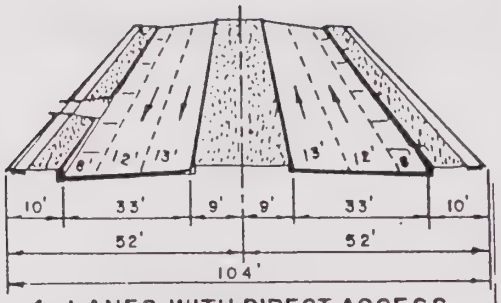
MAJOR INDUSTRIAL SERVICE STREET

* (ALSO 108' WIDE WITH 18' WIDE MEDIAN ISLANDS, AND 13' INSIDE TRAVEL LANES.)

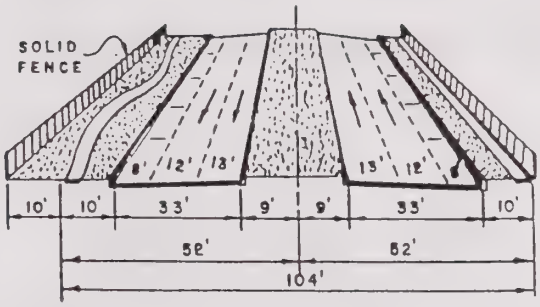
Source: City of Fremont, Standard Details, April 5, 1985

Figure 8-3

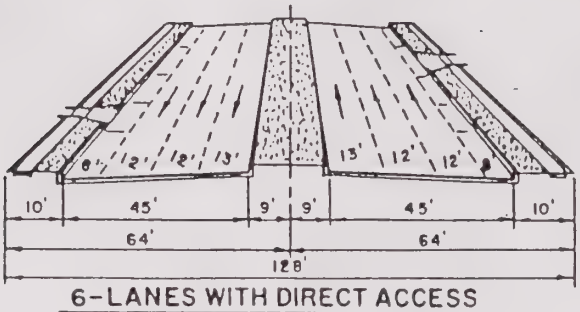
Divided Arterial



4-LANES WITH DIRECT ACCESS

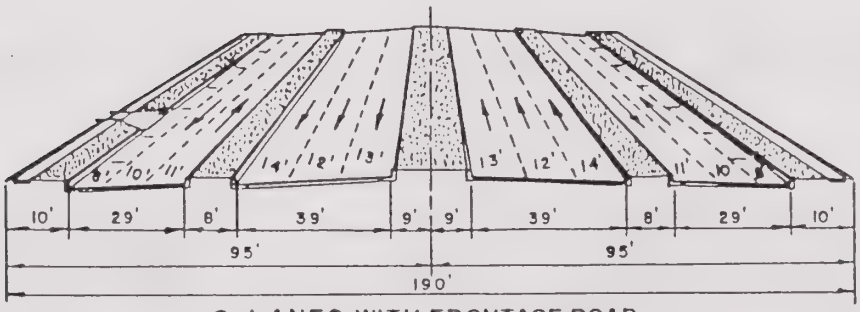


4-LANES WITH BACK-UP LOTS



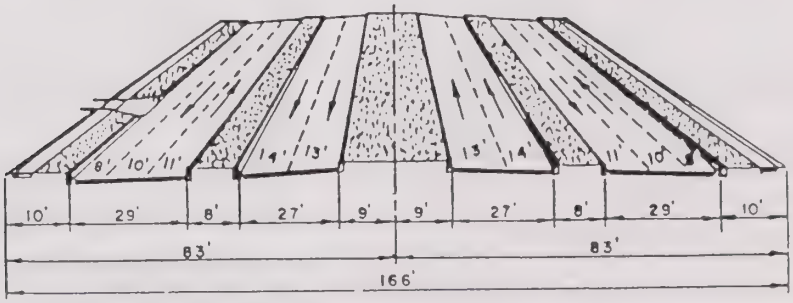
6-LANES WITH DIRECT ACCESS

(116' FOR 6-LANES WITH NO PARKING)
(140' " 8 " " " ")



6-LANES WITH FRONTAGE ROAD

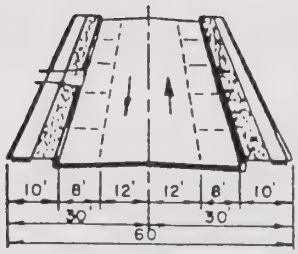
(FRONTAGE ROADS 34' IN MULTIPLE DWELLING OR COMMERCIAL AREAS.)



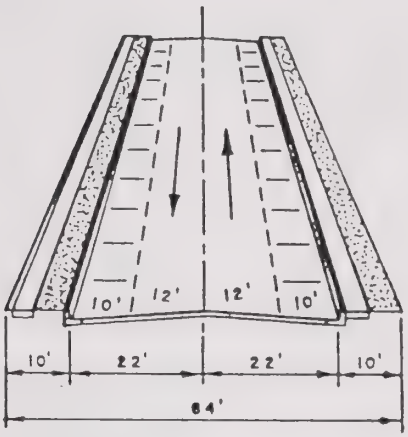
4-LANES WITH FRONTAGE ROAD

(FRONTAGE ROADS 34' IN MULTIPLE DWELLING OR COMMERCIAL AREAS.)

Collector

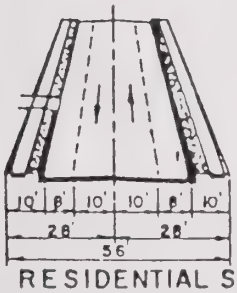


RESIDENTIAL COLLECTOR STREET



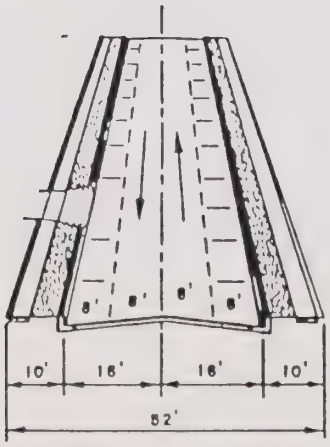
MINOR COMMERCIAL OR INDUSTRIAL SERVICE STREET

Local



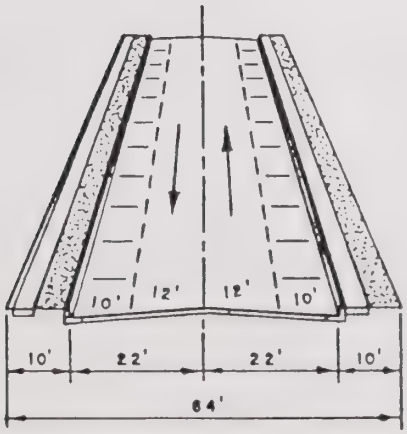
MINOR RESIDENTIAL STREET

(AND CUL-DE-SAC STREET OVER 300' IN LENGTH)



CUL-DE-SAC STREET

(UNDER 300' IN LENGTH)



MINOR COMMERCIAL OR INDUSTRIAL SERVICE STREET

Parkway. A parkway functions as an expressway or arterial but is designed, as its name implies, to have a "park-like" quality with more landscaping and openness. Parkways therefore require increased setbacks and wider right of way than a standard arterial.

Collector. A collector street provides both access and movement within residential, commercial, and industrial areas. These roads serve relatively short trips and collect trips from local streets and distribute them to the arterial network.

Local. The primary function of these streets is land access. Movement on local streets is incidental and involves traveling to or from a collector street.

The current system of major streets (freeways, arterials and collectors) is shown on Figure 8-4. Those streets not shown are considered minor. While the vast majority of streets in Fremont are public, the City also has permitted the development of privately owned and maintained streets within residential, commercial and industrial developments.

Sidewalks

It is the policy of the city to require installation of concrete sidewalks on both sides of all public streets at the time of adjacent development. In private streets in the hill area, a sidewalk along only one side of the street is allowed to reduce the amount of grading needed. This one-side sidewalk policy has left some homes without sidewalks and occasionally impaired the pedestrian circulation system where it is discontinuous. It is a particular concern for children walking to school.

Condition of Fremont Streets

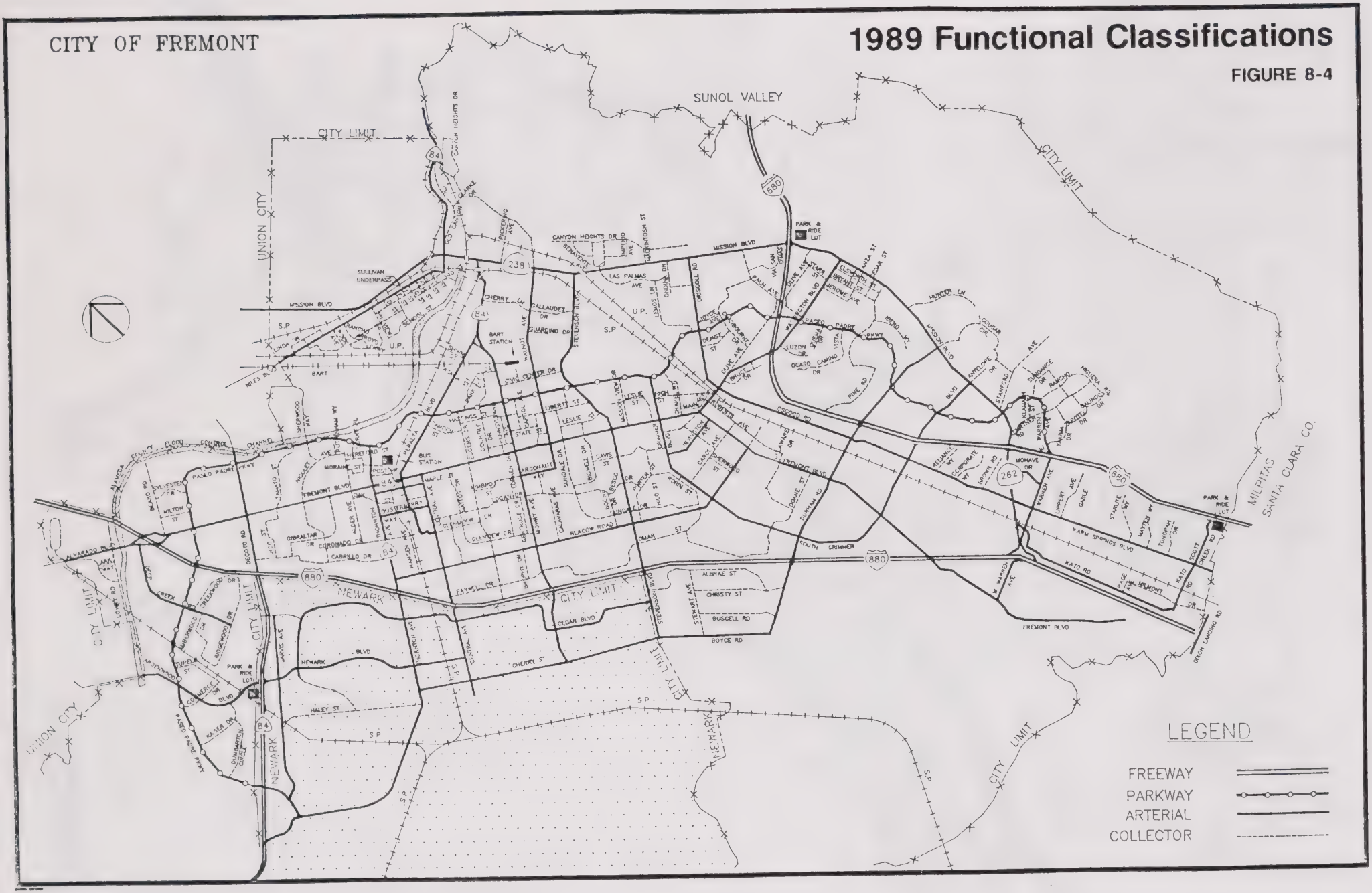
Because Fremont has been built primarily in the last twenty-five years, most of Fremont's streets are designed to meet modern standards for accommodating the automobile. Arterials have four to six lanes and turning lanes. Almost all major intersections are signalized with a left-turn cycle to avoid conflicting auto movements. Because most roadways are relatively new and have been sufficiently maintained, most roadway surfaces in Fremont are in good condition allowing for safe and convenient travel.

The City's policy has been to require development of a road at the time of the development of adjacent property. As a result, some major thoroughfares and collectors have not been developed to their planned width in some locations throughout the City.

CITY OF FREMONT

1989 Functional Classifications

FIGURE 8-4



Amount of Traffic on Fremont's Streets

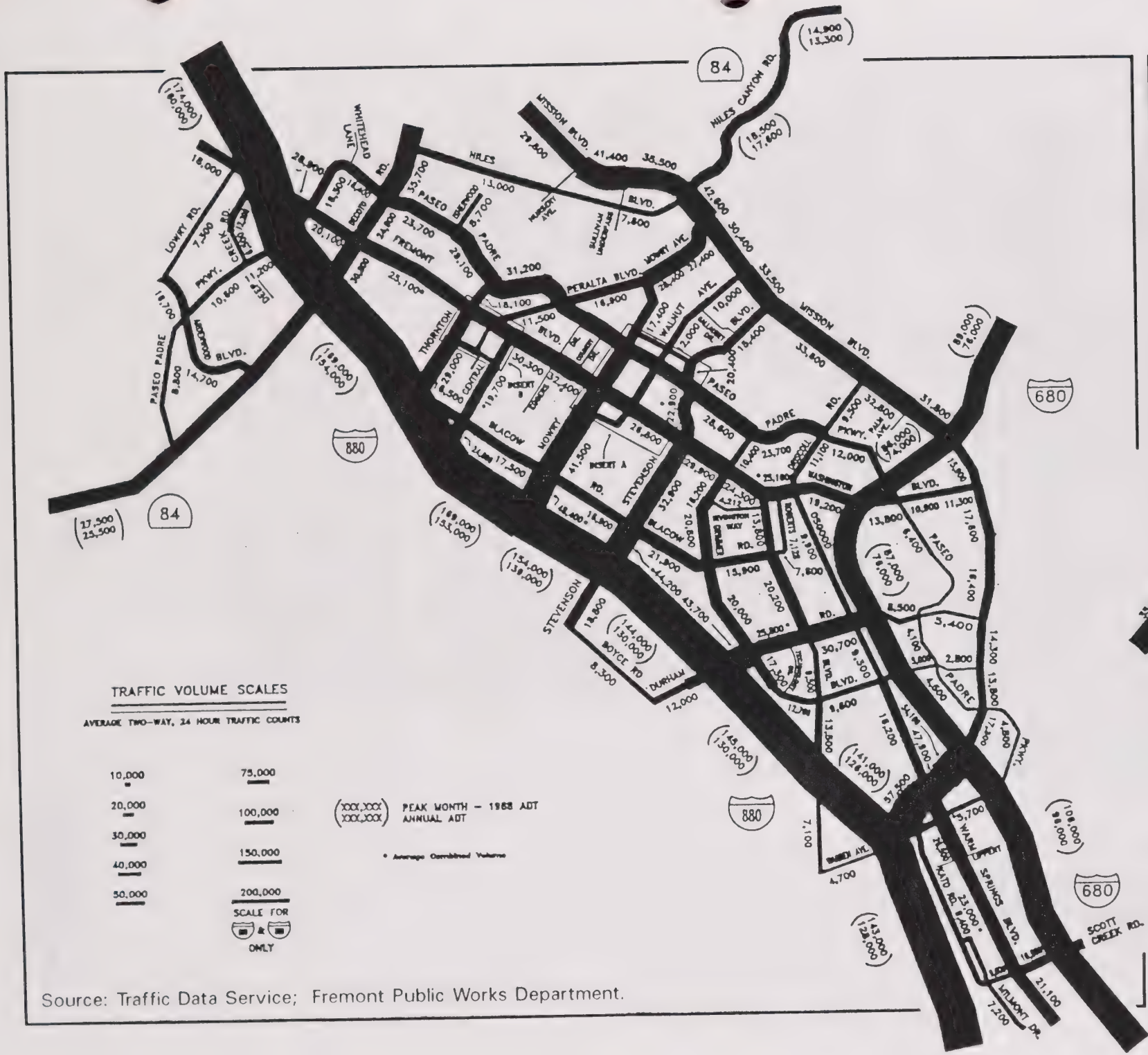
One common measure of the amount of traffic on city streets is how many cars use them in 24-hours. These volumes are indicated on Figure 8-5 for Fremont's major streets. The streets with the heaviest volumes are Mowry Avenue between Blacow Road and 1-880; Mission Boulevard, between Warm Springs Boulevard and 1-880; and Stevenson Boulevard, between Blacow Road and 1-880. Volumes are an indicator of travel patterns and the level of environmental impacts due to traffic (e.g., noise), but they do not necessarily indicate the presence of congestion problems. Congestion is related to several variables in addition to volume, such as the number of lanes, the presence of barriers (such as signals and intersections), and the concentration of traffic at peak times. To determine the level of congestion, a level of service analysis is used.

Level of Service

On major City streets, the most significant feature affecting the quality of traffic flow is the signalized intersection. If an intersection is designed with enough capacity, vehicles should not have to wait through more than one signal cycle to get through it. If they have to wait through more than one cycle, such an intersection operates at a poor "level of service".

Intersections are rated based on a level of service scale. This scale is similar to school report cards in that an "A" to "F" rating is assigned to the intersection, with "A" representing excellent operating conditions and "F" representing failure. Measurements are usually taken at peak times, typically from 7 - 9 a. m. and 4 - 6 p.m. The following are examples of the different level of service grades:

- Levels of service (LOS) "A" and "B." These are the least congested intersections.
- LOS C. This is a stable operation with an acceptable level of delay.
- LOS D. At this level drivers may have to wait through more than one red signal, but delays are still considered tolerable. Most cities seek to maintain a minimum Level of Service of D at peak times.
- LOS E. These intersections are approaching their capacity and delays can be significant.
- LOS F. Intersections at LOS F are so congested that the intersection operates below its capacity with long queues potentially extending into adjacent intersections.



Source: Traffic Data Service; Fremont Public Works Department.

• FREMONT GENERAL PLAN

1989 TRAFFIC FLOW

24 hour volumes on major street system

FIGURE 8-5

Level of service is determined by calculating an intersection's volume-to-capacity (V/C) ratio. This is the ratio of the amount of traffic actually going through an intersection compared to the total possible traffic capable of going through the intersection. The closer the intersection operates to capacity, the poorer its level of service. A "D" level of service, for example, would have a volume-to-capacity ratio of from 0.81 to 0.90.

An inventory was made in 1988 of the operating conditions at major intersections at peak times. Table 8-1 shows the LOS at fourteen worst intersections.

Congestion at intersections can cause other impacts besides delay. When routes are regularly congested, drivers often seek alternative routes through neighborhoods. Increased traffic on residential streets is a safety and environmental concern for those affected neighborhoods. This is not a persistent problem except in a few locations in Fremont at this time.

Regional Highways and Freeways

The regional highway network consists of designated highways and freeways which connect Fremont to the remainder of the region and State. The freeways and highways are the arteries of the Bay Area's economy. Most Fremont workers commute on the regional highway and freeway network every day, and every business in the City is dependent on it. The highways traversing the City are developed and maintained by the California Department of Transportation (CALTRANS).

Freeways. Fremont is served by three freeways:

- *I-880.* This freeway connects Fremont to much of the rest of the East Bay, extending from Oakland to San Jose. It currently has two lanes in each direction from Santa Clara County line to Mission Boulevard, and three lanes to the northern City border. There are recurrent congestion problems southbound 1-880 approaching the Santa Clara County line and northbound 1-880 north of the Fremont-Alvarado Boulevard interchange. The State is currently expanding I-880 to four lanes in each direction to the Santa Clara County line and expects to have completed the work by 1995. One lane may be reserved for higher occupancy vehicles (e.g., three or more people) at peak times.

- *I-680.* This freeway connects Fremont to the Livermore/Amador Valley and then to Contra Costa County, the Central Valley and Sacramento. It has 2 lanes in each direction from the City's eastern border to Mission Boulevard, and three lanes from there south to the Santa Clara County line. This freeway does not have recurrent congestion problems at this time. Improvements to this freeway are also underway with a third lane being added in areas with only two lanes in each direction.

Table 8-1
Existing Levels of Service:
Fourteen Worst Intersections, 1988

#	Intersection	AM	PM
1.	I-880 NB Ramps & Durham	E(1.00)	E(1.00)
2.	Mission & Niles Canyon	E(0.98)	E(1.00)
3.	Mission & Mowry	E(0.99)	E(1.00)
4.	I-880 NB Ramps & Mowry	A(0.51)	E(1.00)
5.	Blacow & Central	A(0.24)	E(0.99)
6.	Fremont & Washington	C(0.79)	E(0.98)
7.	Blacow & Mowry	A(0.59)	E(0.98)
8.	Mission & Walnut	E(0.92)	E(0.94)
9.	Driscoll & Washington	D(0.90)	C(0.76)
10.	Grimmer & Durham	D(0.89)	D(0.87)
11.	Farwell/Omar & Stevenson	C(0.74)	D(0.89)
12.	Blacow & Stevenson	C(0.78)	D(0.86)
13.	Fremont & Central	C(0.77)	D(0.85)
14.	Fremont & Stevenson	B(0.65)	D(0.85)

Source: City of Fremont, Public Works Department

- *State Route (SR)-84.* The SR 84 freeway extends from I-880 west to the Fremont border and the Dumbarton Bridge leading to San Mateo and Santa Clara counties. This freeway generally has two lanes in each direction and a third high occupancy vehicle lane as it approaches the Bridge toll plaza. There is recurrent congestion during the AM peak westbound approaching the Bridge.

Highways. The State also designates non-freeway inter-regional routes or roadways as State highways. Non-freeway state highways in Fremont (Figure 8.4) are:

- *SR 84.* From the east this route comes from the Livermore Valley through Niles Canyon, proceeds west on Mowry to Peralta, Peralta to Fremont Boulevard connecting to Thornton, and west to I-880. This route has the most severe congestion in Fremont at the intersections of Mission Boulevard with Niles Canyon and Mowry.

- *SR 238.* From the north, this route follows Mission Boulevard from Hayward to I-680. Three of the fourteen worst intersections in the City are located on this route.

- *SR 262.* This route is Mission Boulevard between I-880 and I-680 in the Warm Springs District.

Freeway Interchanges. Some of the most severe existing congestion in Fremont is at interchanges with I-880. Most I-880 interchanges have existing congestion or are projected to have congestion due to approved development. Improvements to virtually every I-880 interchange are currently proposed.

Transit

Fremont is served by three public transit agencies: AC Transit, BART and Santa Clara County Transit. A separate para-transit service is provided through local public support. The three public agencies serving Fremont directly connect with at least ten other public transit agencies serving most of the rest of the Bay Area. In total, there are over two dozen public transit agencies in the nine county Bay Area.

Bus: AC Transit

Fremont and Newark form AC Transit's District 2 which includes a total of 13 different bus lines with a route network oriented to the Union City and Fremont BART stations. These routes have generally the lowest ridership within AC Transit's jurisdiction. AC Transit also operates an express commuter bus from Fremont to the Stanford Industrial Park in Palo Alto.

A recent evaluation of District 2's routes by AC Transit had these criticisms:

1. Many areas are served by long one-way loops. These are the poorest performing routes, even though the neighborhoods they serve are no different from neighborhoods served by better used two-way routes.

2. New development is occurring in areas currently unserved, such as Ardenwood and the area around Thornton and Paseo Padre.

The efficiency and use of transit is strongly influenced by land use patterns. Transit use increases with increasing intensity and also when there are central destinations attracting many trips. Fremont currently lacks a strong central location (aside from the BART station) and much of the City is developed at relatively low densities.

Road and building development standards also affect the convenience and efficiency of transit. Industrial and commercial buildings can be oriented to be convenient for transit use. Convenient pedestrian routes from transit to buildings can encourage transit use. Transit can also be made more efficient and attractive through proper road design and provision of shelters.

Bus: Santa Clara County Transit

Fremont is not within the Santa Clara County Transit district. However, Santa Clara County transit does serve the Fremont BART Station from Santa Clara County. Santa Clara County buses do not provide direct stops outside of the Fremont BART station within Fremont, but serve Milpitas and San Jose from the BART station.

Rail: BART

BART is an intra-regional commuter rail system connecting Fremont to the rest of Alameda County and to Contra Costa County and San Francisco. There is one station in Fremont located adjacent to Fremont's Central Business District.

According to passenger survey information (1987), the Fremont BART station generates about 8800 person-trips per weekday. A 1982 survey found that about 80 percent of the Fremont station's trips originate within Alameda County, while the remaining 20 percent comes from Santa Clara County. The mode of access to the station was primarily by drive-alone vehicles (53.3%), while 24% of BART riders took the bus, 9 percent were dropped off, 8 percent walked, 2.5 percent were in carpools and 2.5 percent used other modes. The primary destinations for Fremont BART riders were other Alameda County stations (50 percent) and San Francisco (45 percent), with a small number destined for Contra Costa County (5 percent).

Paratransit

The City of Fremont participates with Newark and Union City in providing paratransit services. The program is administered by Fremont staff and overseen by the Tri-City Transit Advisory Committee appointed by the city councils of the three cities. The current paratransit program provides demand-responsive, door-to-door transportation to those residents of Fremont who are unable to drive or utilize existing transit services. Funds are received from the State, County and AC Transit.

There are two different services offered:

1. Senior taxi. Senior Taxi is available to ambulatory persons 55 or older who can walk unaided to and from a taxi.

2. Paratransit. Paratransit service includes both taxi and van service. Paratransit taxi is for non-wheelchair bound riders who need special help during their trip. A paratransit van is used for those requiring a wheelchair. The paratransit service must be scheduled 24 hours in advance.

These paratransit services complement BART and AC Transit by enabling the transportation disabled population to access these systems. Combined, these services provided 28,714 trips in 1989. A needs assessment conducted for the Alameda County five-year paratransit plan found that Fremont had an unmet need of 12,313 taxi and 2,693 van trips a month in 1986.

Commercial Transportation

Trucks

Fremont's industry and commerce is dependent on trucks to import goods and to export products. Trucks pose special concerns due to their size, weight and noise. Trucks accelerate slowly, take a large amount of road space, have large turning radii, are slow going up and down steep grades and break down pavement by their weight. They are noisier than automobiles due to their size and use of noisy speed reduction devices (such as Jacobs Brakes). As a result of these impacts, cities designate specific routes for truck traffic.

Fremont's current system of truck routes is shown on Figure 8-6. All trucks exceeding 10,000 pounds must use the truck routes except for local delivery or pick-up. Some truck routes are located on State routes where the designation is under the purview of the State. The existing lack of a connection between I-680 and I-880 leads to a significant amount of truck traffic on Mission Boulevard and on Durham Road, the most direct truck routes connecting the freeways. There is no truck terminal in Fremont.

Rail

Freight. Fremont is crossed by several rail lines (shown on Figure 8-4) and is serviced by two major freight rail companies: Southern Pacific and Union Pacific. Limited information is available on commercial train traffic; estimates range from eight to twelve trains per day on some lines. Several at-grade rail crossings of major roads disrupt traffic and cause considerable congestion. Trains also pose a potential safety hazard, although accidents are rare.

Passenger Rail. While a passenger rail train (AMTRAK) passes through Fremont on its way to or from Oakland, there is no station in Fremont.

Airplanes

Fremont has had a small airport for the use of gliders and their tow-planes. This airport is on land planned and scheduled for industrial development and is due to be closed. A possible small-plane general aviation commercial airport is under consideration for an area west of I-880. The City is reviewing the appropriateness of the site for airport use.

Two commercial general aviation airports are located within twenty miles of Fremont, one in Hayward and the other in San Jose. The nearest major commercial aviation facilities are located about twenty miles south in San Jose and twenty-five miles north in Oakland. The Oakland Airport is also served with a shuttle from the nearest BART station. The location of these facilities is shown in Figure 8-7.

Commercial Bus

The City of Fremont is served by both the Greyhound and Peerless Stage bus companies. Peerless maintains a small bus station in Centerville. It provides service to Oakland and San Jose. Greyhound has two stops in Fremont, one in Mission San Jose, and another along Warm Springs Boulevard, traveling between Pleasanton and San Jose.

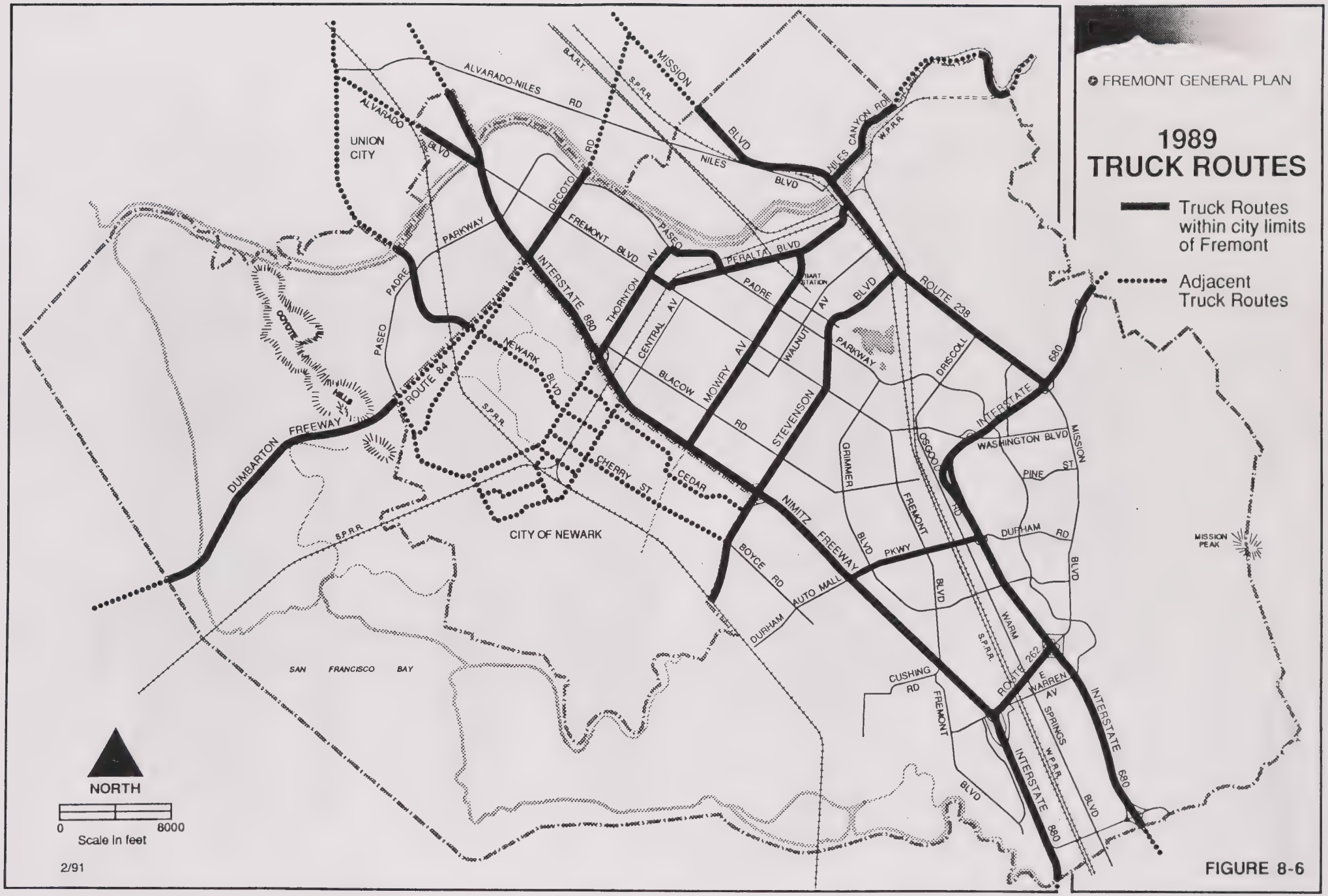
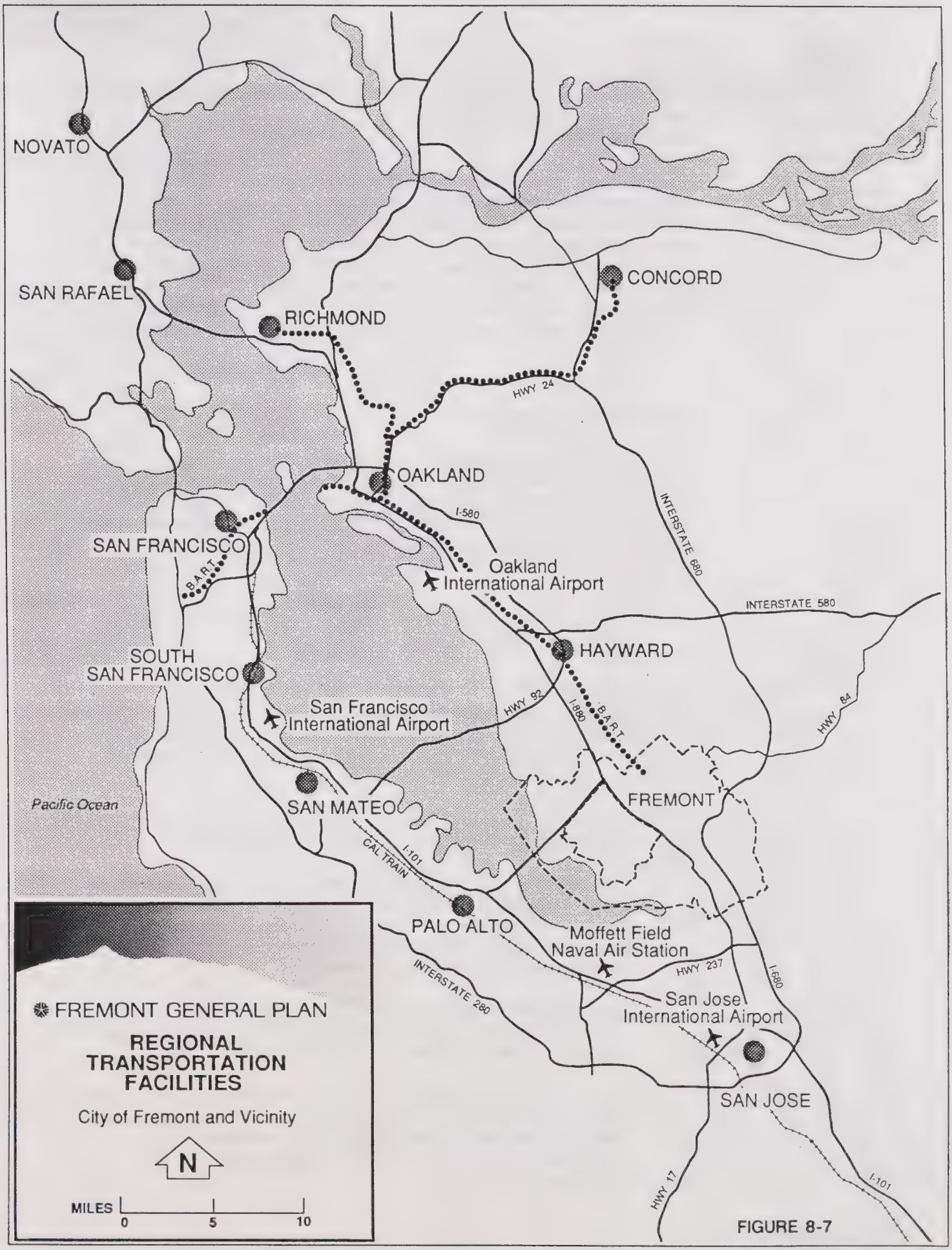

FREMONT GENERAL PLAN
1989
TRUCK ROUTES
Truck Routes within city limits of Fremont
Adjacent Truck Routes
UNION CITY
CITY OF NEWARK
SAN FRANCISCO BAY
MISSION PEAK
ALVARADO-NILES RD
ALVARADO BLVD
DECOTO RD
FREMONT BLVD
PARKWAY
PADRE
PASEO
INTERSTATE 880
THORNTON AV
CENTRAL AV
BLACOW RD
MOWRY AV
PERALTA BLVD
BART STATION
WALNUT AV
STEVENSON BLVD
NEWARK BLVD
ROUTE 84
DUMBARTON FREEWAY
CHERRY ST
CEDAR
BOYCE RD
DURHAM
AUTO MALL
NIMITZ FREEWAY
MISSION BLVD
NILES
MILES CANYON RD
ROUTE 238
DRISCOLL
GRIMMER
OSGOOD RD
FREMONT BLVD
PKWY
WASHINGTON BLVD
PINE ST
DURHAM RD
WARM SPRINGS BLVD
ROUTE 262
E WARREN AV
CUSHING RD
INTERSTATE 680
S.P.R.R.
B.A.R.T.
W.P.R.R.
NORTH
0
8000
Scale in feet
2/91

FIGURE 8-6


NOVATO
SAN RAFAEL
RICHMOND
CONCORD
HWY 24
OAKLAND
I-580
SAN FRANCISCO
B.A.R.T.
Oakland
International Airport
INTERSTATE 680
INTERSTATE 580
HAYWARD
SOUTH
SAN FRANCISCO
San Francisco
International Airport
HWY 92
I-880
B.A.R.T.
HWY 84
Pacific Ocean
SAN MATEO
FREMONT
CAL TRAIN
I-101
PALO ALTO
Moffett Field
Naval Air Station
HWY 237
I-680
INTERSTATE 280
San Jose
International Airport
SAN JOSE
HWY 17
I-101
FREMONT GENERAL PLAN
REGIONAL
TRANSPORTATION
FACILITIES
City of Fremont and Vicinity
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10

FIGURE 8-7

Bicycles and Pedestrians

Bicycles

The relatively flat terrain in Fremont is conducive to bicycling for recreation, commuting and other transportation needs. An extensive 86 mile on-street bicycle route system was originally planned for the City. However, only about 40 miles of bicycle routes have been completed on City streets and 15 miles off City streets. Bicycle routes have remained incomplete due to perceived safety hazards, conflicts with the desire for on-street parking, and lack of funds. Several routes lack key links. Most of the City's bicycle routes are located along thoroughfares. The existing bike lane system is shown in Figure 8-8.

Pedestrians

There is an extensive recreational trail system serving portions of Fremont, including the Alameda Creek Trail and portions of a regional trail proposed for ringing the Bay. Sidewalks are a requirement for all developments abutting improved and unimproved streets, except in older industrial areas. An extensive pedestrian system was proposed and planned for the City's Central Business District, but only segments of the system have been implemented.

Parking

Although people need locations for parking in order to use automobiles and trucks, providing off-street space for cars is more a land use issue than transportation issue and is therefore largely addressed in the Land Use Chapter.

However, provision of parking becomes a transportation issue when parking and transportation needs conflict. This occurs in several ways:

- **On-street parking.** On-street parking on major streets can conflict with moving traffic, and reduce the amount of roadway width available for vehicles and bicycles. Conflicts between parking and travel currently occur most in some older commercial areas in Fremont and in some residential frontages.

- **Bicycle routes.** Parking is a concern in relation to bicycle routes where parked cars can reduce space for a bike-lane and be a potential safety hazard for bicyclists.

- **Access to parking.** The location of driveways and parking entrances can have a significant impact on the safety of a road. Improperly located driveways can also lead to traffic in areas (such as a residential neighborhood) where it is not desired.

FREMONT GENERAL PLAN

EXISTING BICYCLE SYSTEM

Bicycle Lane

Frontage Road

Parking Prohibition with at least 15' travel lane

NORTH

0 8000

Scale in feet

FIGURE 8-8

Parking strategies can also be a means to reduce traffic. For example, provision of park and ride facilities and sufficient parking at transit stations are means to reduce road congestion. There are currently two park and ride facilities in Fremont, one on Ardenwood Boulevard at Highway 84 and one at I-680 and Mission Boulevard. Fremont's BART station is one of the very few in the Bay Area with sufficient parking to meet current (1990) demand.

PROJECTIONS

The next twenty years are projected to bring growing congestion on Fremont's and the Bay Area's roads. Because of congestion, those cities providing more efficient and convenient alternatives to the auto will be better able to serve new development. State and Federal laws are also recognizing the necessity of providing alternatives to the auto in order to reduce the environmental impacts of our society's almost complete dependence on auto travel.

In Fremont, the auto will undoubtedly continue to be the dominant mode of transportation. The City must continue to address the needs of auto users. While Fremont cannot transform itself overnight into a City less dependent on the auto, it can begin now to plan for, and devote resources to, making alternatives more available and attractive.

This section describes the trends and assumptions about the future that are the basis for the City's transportation strategy, which is set forth in the section that follows.

Demand for Transportation

Projected Local Growth

The demand for transportation increases with new development. The level of demand depends on the development permitted under the General Plan and on regional and local economic conditions. The Association of Bay Area Governments (ABAG) prepares projections for Bay Area growth through the year 2005. Regional transportation planning is based on ABAG's projections.

The City has extrapolated from ABAG's projections for the year 2005 to the year 2010. To be conservative in transportation planning and provide sufficient capacity on roads, the City's projections are based on somewhat higher levels of employment growth than might be expected from ABAG figures. The City's residential development projections are generally consistent with ABAG's.

Regional Growth

ABAG's projections for the Bay Area as a whole show the region will add 881,000 more jobs and 882,000 more residents in the next 15 years. About one-quarter of the region's employment growth is projected to occur on the Peninsula from Silicon Valley to San Francisco. While this area is expected to add 228,000 jobs, it is projected to add enough housing to accommodate only 67,000 workers. The resulting deficit between work force and local residents is likely to translate into a significant increase in transportation demand from other parts of the region to the Peninsula corridor.

Roadway Network

Figure 8-9 shows the City's planned roadway network, by road function; Figure 8-10 shows the planned network by number of roadway lanes. Figure 8-10 shows expected improvements to the State Highway/Freeway network as well as to local roads. The City is planning only one major new arterial roadway, as follows:

- Stevenson Extension. This road is planned to connect to an arterial in Newark and provide a west-side alternative to I-880 for access to Fremont's industrial and commercial areas. The State has proposed a State Route (SR 61) on the west side of I-880 extending south from Oakland. In Fremont, the proposed route has been shown in the vicinity of the Stevenson Extension (see State Highway section below for further discussion). Due to the importance of providing alternative access to the industrial areas, the City may need to consider upgrading the proposed "Stevenson Extension" to a larger "expressway" type of route extending from Newark to the Santa Clara County line. Any proposed development of a road would need to consider and mitigate impacts on wetland resources. The City of Newark has shown a State Route connecting into Fremont on drafts of a new General Plan, but does not show a local arterial.

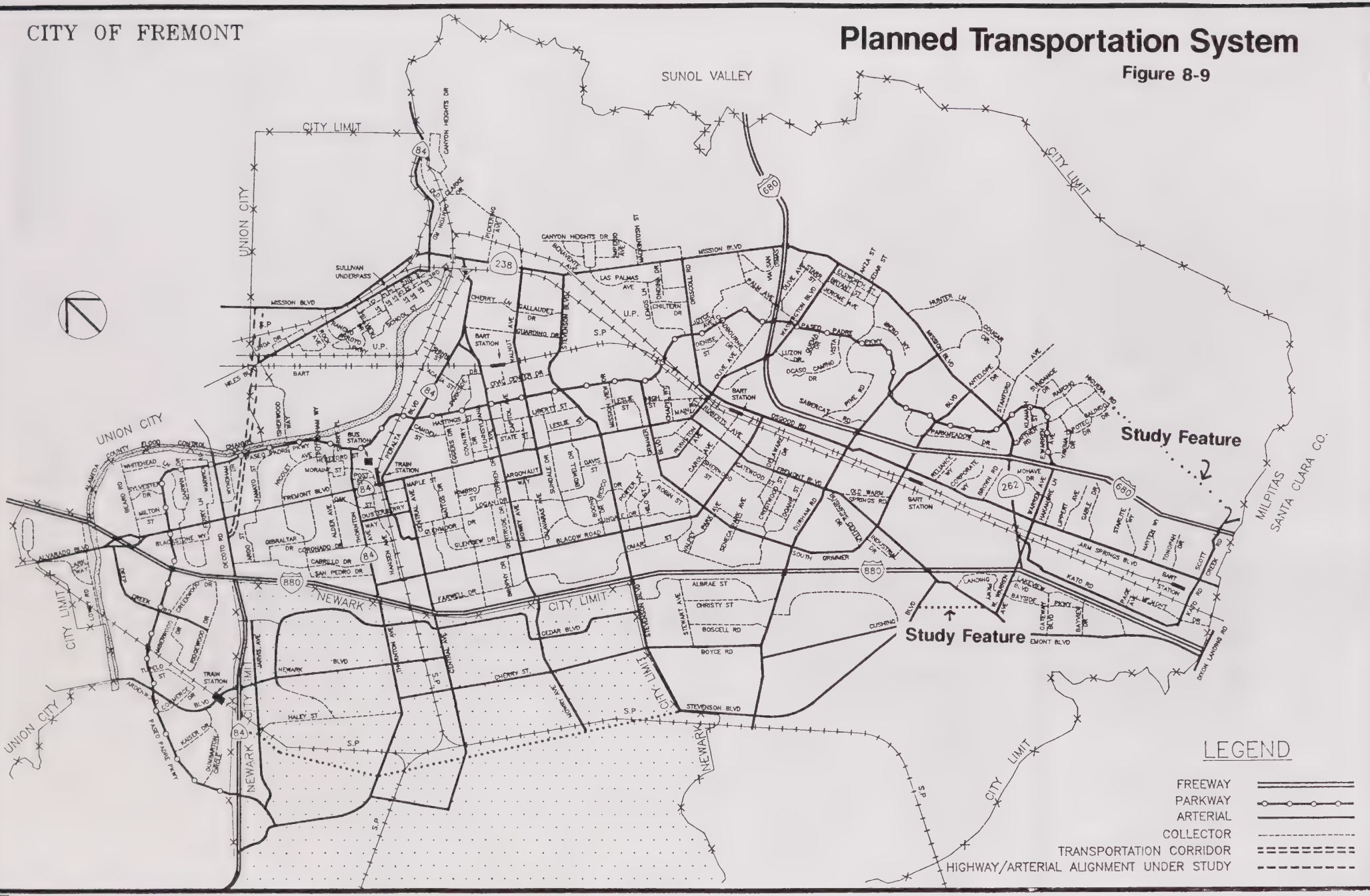
- The City is also examining the need for two connections shown as "Study Features" on Figure 8-9, Planned Transportation System. The first is the extension of Rancho Higuera Road to serve as a collector or an emergency vehicle accessway for the new and proposed residential development in that area. The second is the connection of Stevenson Boulevard Extension/Cushing Parkway to Fremont Boulevard. The need for these facilities as well as impacts on the adjacent neighborhoods would be carefully assessed.

No connection between Canyon Heights Drive and Morrison Canyon Road is shown on the Plan. However, pedestrian and emergency access needs will be assessed and provided if needed.

CITY OF FREMONT

Planned Transportation System

Figure 8-9

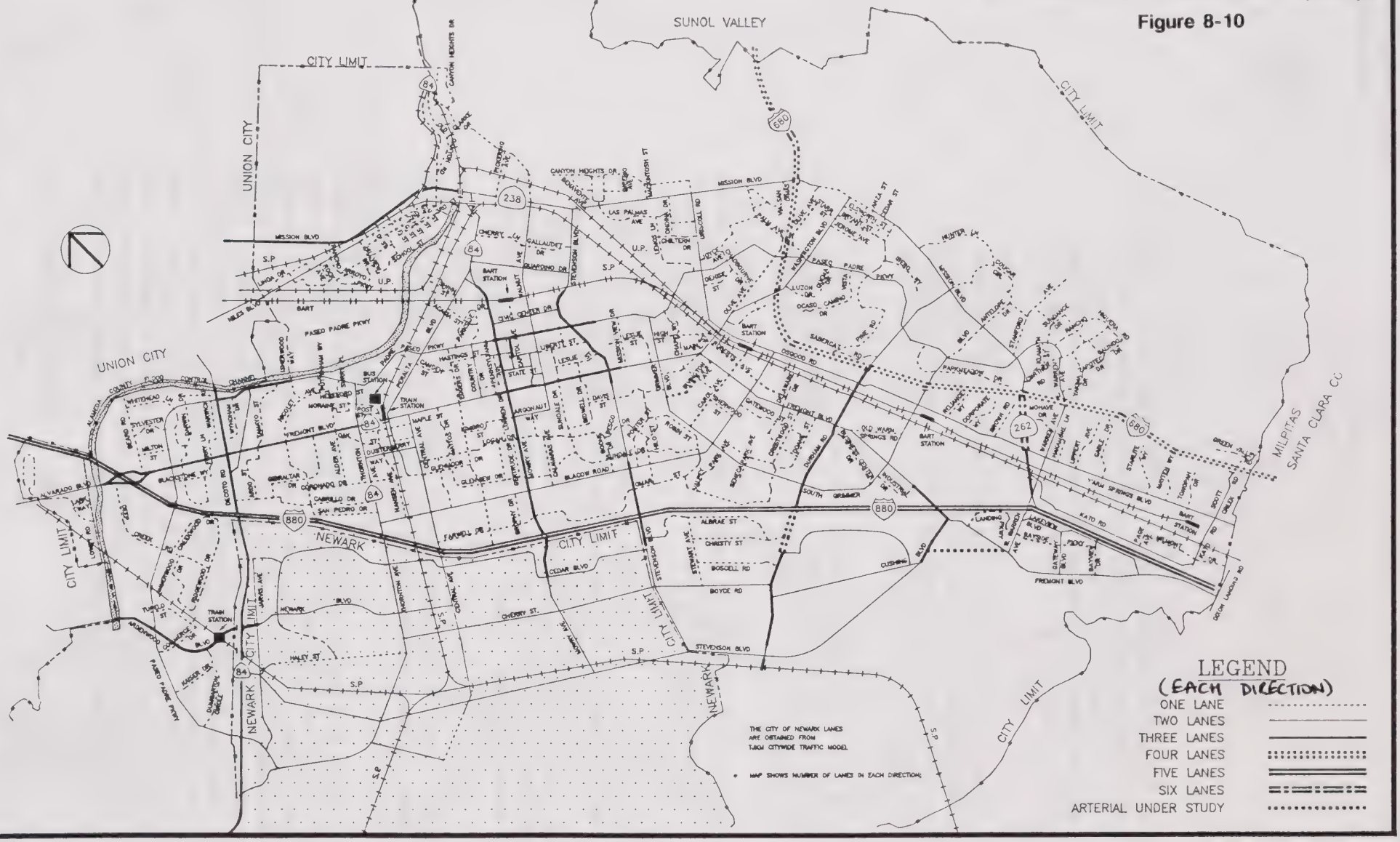


CITY OF FREMONT

Planned Number of Lanes

For collectors, arterials and highways

Figure 8-10



City Road Conditions

The City's transportation model is used to estimate the impact of future traffic on the City's planned roadway network. The impact of expected growth in traffic on the Level of Service (LOS) is generally the issue of most concern in evaluating the adequacy of the road system. Based on initial assessments of the roadway network, this General Plan identifies specific improvements to intersections that will be necessary to improve the flow of traffic. These improvements are listed in an Appendix to the Transportation Background Report and are assumed to have been completed in the model. Because improvements are proposed to address existing roadway problems, the projected list of congestion problems is different from the list of projected problems. No local roadway to roadway grade separations are assumed or recommended in this General Plan.

The City's transportation model projects that 18 intersections will operate at LOS E or F in 2010. The location of those intersections is shown in Figure 8-10, and they are listed in Table 8-2.

When faced with expected congestion, an alternative strategy to increasing the "supply" of roads (i.e., more and wider roads), is to reduce the demand for travel at peak times. The set of strategies cities adopt to reduce demand are lumped under the title "Transportation Demand Management" (TDM) which is discussed below. The traffic model assumed that some of the trips normally expected at peak times would be diverted by a TDM program.

While congestion is never desirable, the City has concluded that it is sometimes not possible, and sometimes not desirable to mitigate the congestion. Of those identified at LOS E or F, almost all can be classified in one of four ways.

- **Regional Traffic.** In some locations (e.g., Durham Road), regional traffic with destinations and/or origins outside of Fremont is the primary cause of congestion and there is little the City can do alone to address the problem.

- **Inter-city Traffic.** At a few intersections (e.g., along Stevenson Boulevard and Mowry Avenue) inter-city traffic and regional traffic combine to cause congestion on streets which Fremont shares with its neighbors. In these instances, Fremont needs to work closely with its neighbor to address the problem.

- **Historic/Community Character.** Several of the City's arterials (e.g., Mission Boulevard, Fremont Boulevard and Washington Boulevard) are the "main streets" of the City's historic communities. Many of Fremont's historic buildings and much historic landscaping borders these streets. Widening to accommodate additional traffic would have a significant negative impact on that character.

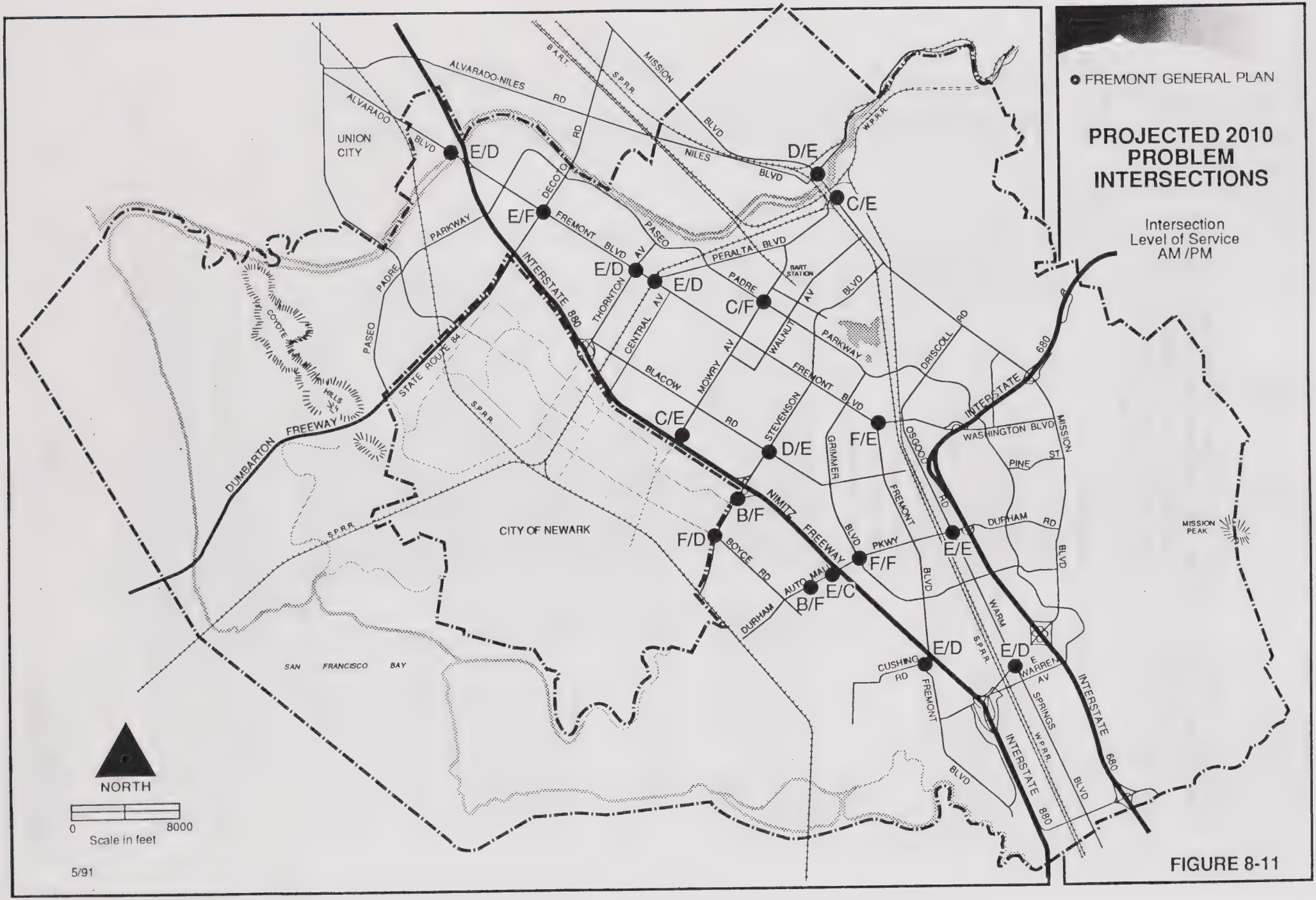

FREMONT GENERAL PLAN
PROJECTED 2010 PROBLEM INTERSECTIONS
Intersection Level of Service AM /PM
UNION CITY
CITY OF NEWARK
SAN FRANCISCO BAY
ALVARADO-NILES RD
ALVARADO BLVD
MISSION BLVD
NILES BLVD
DECOTO RD
FREMONT BLVD
PARKWAY
PASEO PADRE
PERALTA BLVD
THORNTON AV
CENTRAL AV
BART STATION
WALNUT AV
MOWRY AV
BLACOW RD
STEVENSON BLVD
GRIMMER BLVD
OSGOOD RD
DRISCOLL RD
WASHINGTON BLVD
PINE ST
DURHAM RD
BOYCE RD
AUTO MALL
PKWY
CUSHING RD
WARREN AV
WARM SPRINGS BLVD
INTERSTATE 880
INTERSTATE 680
NIMITZ FREEWAY
DUMBARTON FREEWAY
STATE ROUTE 84
COYOTE HILLS
MISSION PEAK
B.A.R.T.
S.P.R.R.
W.P.R.R.
E/D
E/F
D/E
C/E
C/F
F/E
B/F
F/D
F/F
E/C
E/E
NORTH
0
8000
Scale in feet
5/91

FIGURE 8-11

Table 8-2
General Plan Level of Service
Year 2010 Projections
8/2/90

		AM		PM	
Rank #	**Intersection**	**V/C**	**LOS**	**V/C**	**LOS**
1	Cherry/Boyce/Stevenson	1.11	F	0.82	D
2	Durham/Grimmer	1.10	F	1.06	F
3	Albrae/Stevenson	0.67	B	1.06	F
4	Fremont/Union/Washington	1.05	F	1.00	E
5	Lakeshore/Durham	0.64	B	1.02	F
6	Mowry/Paseo Padre	0.79	C	1.01	F
7	Mission/Mowry	0.78	C	0.98	E
8	Durham/Osgood	0.94	E	0.96	E
9	Cushing/Fremont	0.96	E	0.83	D
10	Blacow/Stevenson	0.81	D	0.96	E
11	Fremont/Peralta	0.96	E	0.84	D
12	Fremont/Thornton	0.94	E	0.86	D
13	I-880 NB off/Mowry	0.71	C	0.93	E
14	Durham/I-880 SB Ramp	0.93	E	0.74	C
15	Mission/Warm Springs	0.93	E	0.85	D
16	Alvarado/Deep Creek	0.92	E	0.85	D
17	Mission/Niles Canyon	0.83	D	0.91	E
18	Argonaut/Mowry	0.59	A	0.90	D
19	Paseo Padre/Walnut	0.70	B	0.89	D
20	Fremont/Mowry	0.74	C	0.89	D
21	Scott Creek/I-680 SB Off	0.82	D	0.89	D
22	Blacow/Mowry	0.83	D	0.88	D
23	Farwell/Mowry	0.79	C	0.88	D
24	Decoto/Fremont	0.87	D	0.85	D
25	Civic Center/Walnut	0.77	C	0.87	D
26	Peralta/Mowry	0.69	B	0.87	D
27	Blacow/Grimmer	0.80	C	0.86	D
28	Driscoll/Paseo Padre	0.76	C	0.85	D
29	California/Dixon Landing	0.85	D	0.50	A
30	Paseo Padre/Thornton	0.63	B	0.85	D
31	Civic Center/Mowry	0.50	A	0.85	D
32	Mission/Walnut	0.77	C	0.85	D
33	Blacow/Fremont	0.81	D	0.85	D
34	Paseo Padre/Peralta	0.77	C	0.84	D

Source: Citywide Traffic Model

Assumptions:

a. General Plan streets built
b. Freeway interchanges reconstructed
c. I-680 to I-880 connector
d. Local intersections improved per Impact Study
e. Effective Transportation Demand Management Program
f. SR 84 expressway to Mission; Route 61 expressway west of I-880
g. SR 238 – 6 lanes

- **Development intensity.** A few intersections are congested due to projected high intensity development in the City's Central Business District (CBD). Limited congestion at a few intersections is considered an acceptable condition in order to achieve other goals of this General Plan regarding vitality and intensity in the CBD.

Interchanges

Almost all of the I-880 interchanges will be re-built as a result of the widening of I-880. Until these improvements are made, most interchanges are projected to be congested, with some congestion related to development in adjacent cities. The City's traffic model does not indicate a need for improvements to existing I-680 interchanges and no significant improvements are currently proposed.

State Highway Network

As is evident in reviewing the projected location of jobs and housing, there is likely to be a significant increase in demand for inter-regional transportation over the next twenty years, especially to the Peninsula. While some transportation demand can and should be met by alternatives to the auto, future regional development is also likely to lead to increased pressure on an already congested regional highway network.

Several improvements to the regional highway network are currently underway. Some were described in the previous section. Additional proposed improvements include the following:

- *SR 84.* A freeway extension of SR 84 to Mission Boulevard was identified as a project to be funded by local sales tax funds. Much of the right-of-way for such an extension has been reserved for many years. However, concerns about the impact of a freeway have prompted the City to recommend the consideration of alternatives for the route, including the possibility of no road in the historic alignment, or the development of a "parkway" rather than a freeway. The historic alignment of SR 84 between Decoto Road and Mission Boulevard is shown on Figure 8-8 as "Transportation Corridor."

- *SR 238 (Mission Boulevard) Widening.* Another project targeted for development by local sales tax funds is widening of State Route 238 (Mission Boulevard) from Hayward through to Mowry Avenue.

- *I- 880/I-680 Connector.* CALTRANS has begun the process of identifying alternative locations for freeway connections between I-880 and I-680 in Fremont or Milpitas. This improvement is essential to removing a significant amount of regional traffic from Mission Boulevard and Durham Road between I-680 and I-880. This improvement is assumed to be built in the next 20 years in the City's traffic model.

- *SR 61 Study.* The State has proposed a state highway west of I-880 to relieve congestion on this freeway. This route, known as State Route 61, has been under study from Oakland to the San Mateo Bridge. While proposed for extension south to the Santa Clara County line, little study of a possible SR 61 alignment in Fremont has been done. This route faces constraints due to existing development patterns and possible impacts on valuable wetlands.

Despite the expected improvements to State highways (not including SR 61), most projections show significant congestion on portions of the regional network, and especially I-880. I-880 is currently the major access road to the City's industrial area and a high level of congestion could discourage industrial development. Congestion on I-880 may also lead to recommendations for metering for freeway on-ramps. Metering can have impacts on the City's streets which should be evaluated prior to meters being installed.

Transportation Demand Management

Transportation Demand Management (TDM) refers to a variety of means to reduce the level of demand for transportation. The basic goal of TDM strategies is to reduce the number of single-occupant vehicles (SOV) on the road at peak times. This reduction reduces the need for road development and reduces the environmental impacts of autos. A recently passed State Referendum (1990) requires that cities and counties adopt "Congestion Management Plans." Such plans generally include various TDM measures.

A reduction in transportation demand at peak times is accomplished in two ways: by encouraging people to use alternative ways of traveling (e.g., transit or carpools), and/or by encouraging people to travel at off-peak times. TDM strategies include the following:

- Improved transit service
- Financial and other incentives to use transit
- Disincentives to use the auto (e.g., charge for parking)
- Incentives to car-pool (e.g., establishment of car-pool coordinators, preferential parking)
- Establishment of van-pools
- Permit greater flexibility in work hours ("flex-time")

Many other TDM strategies are also being adopted or considered by cities across the nation. While TDM strategies are generally adopted or promoted by local government, implementation is done by both local governments and by employers. The City of Fremont does not currently have a comprehensive TDM program, although the City has had some large employers adopt TDM techniques as mitigation for traffic impacts.

The City's traffic model has assumed that a proportion of peak hour home-to-work trips would be diverted due to a TDM program. Without this diversion ten more intersections in the City are projected to be at level of Service E or F in the year 2010 than are currently projected. A TDM program

is therefore an important element of the City's transportation management strategy.

Transit

AC Transit and BART are expected to continue to be the major public transit providers to Fremont. The Santa Clara County Bus service may change in the future when new BART stations are built closer to the Santa Clara County line. AC Transit and BART are addressed below.

Bus: AC Transit

Three trends are at work that should increase the efficiency and use of AC transit service in Fremont in the future. One trend relates to land use, another to improvements in the design and implementation of bus service, and a third to demographics.

In regards to land use, the City is projected to fill in vacant land and generally become more intensely developed. The land use plan calls for higher intensities of commercial and residential use in central locations, such as the CBD and district centers. Higher intensity uses are more conducive to being efficiently served by transit. New development should also be more conducive to transit due to site and building design. This plan recommends stronger consideration of transit needs in the design of commercial and industrial buildings and in site design and standards for new commercial, industrial and residential subdivisions.

The second "trend" relates to improvements in transit service. AC Transit is proposing a redesign of the existing route structure called a "Comprehensive Service Plan." At the heart of their proposal for Fremont is the "timed transfer." The timed transfer network consists of several strategically located transit centers where several routes converge and the buses are scheduled to arrive and depart at the same time. This concept provides passengers with the widest choice of travel opportunities and the minimum amount of backtracking. AC Transit's Comprehensive Service Plan proposes transit centers at the Fremont and Irvington BART stations, and tentatively the Warm Springs BART station, also. AC Transit proposes to implement this plan by 1993. However, the plan will require increased funding which is not yet in place.

Finally, a third trend in relation to transit is demographic. The proportion of the elderly is expected to increase in Fremont. The elderly tend to rely more on transit service than other age groups.

All of the above factors combined -- changes in land use, improved service, and changing demographics -- are unlikely to lead to a dramatic near-term shift from autos to transit. However, the combination of these factors along with other incentives and programs can help the City achieve more efficient and effective transit service over the next two decades.

In addition to better local bus service, an increase in express bus service between the East Bay and Peninsula may also be required if projections regarding job growth (and insufficient housing) on the Peninsula are realized. Such bus service would be necessary if plans for rail service from the East Bay to the Peninsula are not implemented (see below).

Rail: BART

BART plans to increase its service to Fremont by adding two new stations, one in Irvington and the other in Warm Springs (see Figure 8-9). The two stations are projected to generate approximately 14,100 weekday trips by the year 2005. BART has purchased the Warm Springs site and part of the Irvington site. The construction of the extension is partially funded and BART hopes to begin service before the turn of the century. BART has recently proposed a fourth Fremont station to be located near the Fremont/ Milpitas city limits. In this General Plan this station is referred to as the South Fremont Station.

BART's long term plans call for continuing the extension into Santa Clara county to downtown San Jose. The Santa Clara County extension would add another seven stations and generate an estimated 23,000 more riders each weekday.

In the interim, prior to station development, AC Transit has identified a need for more efficient transit service from the industrial and commercial areas of the City to the existing BART Station. In particular, the Warm Springs area is a considerable distance from the Fremont BART station and an express bus service to BART during commute hours would better serve both residents of the area and workers in the industrial parks.

Commuter Rail Service to the Peninsula

Several transit agencies are currently reviewing the potential to establish a commuter rail line from the Fremont/Union City area over the Dumbarton rail-bridge, connecting with CALTRAIN on the Peninsula. The proposed service would use existing rail lines. Preliminary figures show that the service would attract 1000 riders each way per day during peak travel times (based on four trains per day in each direction).

As noted in the discussion of regional employment and housing projections, significant job growth and inadequate housing development are projected for the Peninsula. Such a rail line could not only serve Fremont residents, but potentially reduce existing and future traffic passing through Fremont on its way to the Peninsula.

Paratransit

No projections are available on expected need for paratransit. An expected increase in the number of the elderly would imply a growing need for paratransit services in Fremont.

Bicycles

There are no projections or surveys of bicycle use to indicate future needs or demand. However, two trends indicate a growing demand for bicycle use for recreation and transportation. The increasing health-consciousness of Bay Area residents indicates an increase in people who desire to combine commuting with exercise by bicycling to work. A second trend is the projected increase in the number of Fremont jobs. The high proportion of local residents working in nearby jobs indicates a potential increase in bicycle commuting. Both of these trends require a completed and efficient bicycle network serving commute as well as recreation needs.

Pedestrians

Recent trends towards an increase in shopping and walking as recreational pursuits underscore the importance of a comfortable pedestrian environment to an active and successful retail/commercial environment. Portions of the City can be (and are now) oriented toward pedestrian use. Further enhancement of pedestrian environments in the older commercial areas and in the Central Business District would encourage more walking and less use of the auto for shopping and other needs.

Parking

There are no known proposed Park and Ride sites (as of 1990). All new development is required to provide sufficient on-site parking.

Commercial Transportation

Trucks

Increasing congestion on the freeway network could lead to a significant increase in truck traffic on State designated surface-street highways in Fremont with potential negative impacts of increased congestion and wear on Fremont's roads.

Rail

Freight. The two major north/south commercial rail-lines traveling through Central Park and into Irvington and Warm Springs, are proposed to be consolidated into a single right of way to facilitate the development of a BART extension. Such a consolidation would begin at the southern end of Central Park and continue south. If consolidation can be accomplished without significant reduction in freight service, it would reduce conflicts with autos and adjacent land uses. Consolidation should be evaluated and promoted for other rail lines in the City to reduce the number of roadway/ rail crossings. Fewer crossings will also allow for more efficient development of grade separated crossings.

Passenger. A study funded by the State is examining the potential for an inter-city rail line from the City of Auburn, to Sacramento to Oakland and San Jose. The study is taken from the acronym for the cities involved: ASOS. Such train service would provide direct connections to areas not easily accessible by transit today, and provide an interim link to San Jose until a BART line is completed.

Telecommunications

In looking twenty years into the future, it is important to recognize that the need to transport people may be reduced by more efficient transport of information. As the efficiency and availability of electronic information transfer systems becomes more widespread and accepted, more people will be able to work at home and in more widely scattered work places than is generally accepted today. The impact of "tele-commuting" on the transportation system is difficult to predict. However, cities should plan to meet the needs of the information transportation system (e.g., fibre optic lines). This issue is addressed in the Public Facilities Chapter.

Goals, Objectives, Policies and Implementation

Fundamental Goals

One of the City's **Fundamental Goals (F11)** is "Increased transportation alternatives and Reduced Dependency on the Automobile." This implies that while automobile travel will continue to be an important element of Fremont's transportation network, it will be one part of a comprehensive strategy to address transportation needs.

Other **Fundamental Goals** relate to the importance of preserving and enhancing the character and quality of Fremont as a community. The development of the transportation system should not be accomplished at the expense of the community's character or environmental quality. Another **Fundamental Goal** relates to maintenance of economic vitality. A convenient, efficient transportation system is essential to economic vitality.

Transportation Goals

These various goals can conflict when provision of necessary transportation facilities is perceived to have a negative impact on the environment of the community. While these concerns must often be addressed on a case by case basis, the City's overall transportation strategy, as described in the goals, objectives and policies below, seeks to balance these sometimes conflicting goals.

GOAL T 1: **Efficient use of roadway system to provide convenient travel, reduce congestion, and improve air quality**

GOAL T 2: **Convenient alternatives to the automobile to conserve energy, reduce congestion, improve air quality and provide a variety of transportation choices to meet a variety of needs**

GOAL T 3: **Transportation facilities and corridors that enhance the City's historic, visual, natural resources**

TRANSPORTATION (T) GOAL 1:
Efficient use of roadway system to provide convenient travel, reduce congestion, and improve air quality

OBJECTIVE T 1.1: **Completion and maintenance of the designated road network**

Policy T 1.1.1: The City establishes a hierarchy of roads as defined below and as shown on Figure 8-9. The cross-sections shown in Figure 8-3 show typical, minimum right-of-way requirements for each type of non-freeway street. Actual right-of-way requirements may vary depending on site-specific constraints, and the need for on-street parking or bicycle lanes.

Freeways: Freeways are high speed, limited access facilities with grade separated intersections and four to ten travel lanes. Freeway right-of-way requirements, design, development and maintenance are the responsibility of the State Department of Transportation (CALTRANS). Freeway interchange design with local streets is the joint responsibility of CALTRANS and the City of Fremont.

Arterials: Arterials are high capacity local facilities for longer, through trips within a community. Arterials may be divided by a median, or undivided and typically have two or three lanes in each direction.

Parkways: A parkway functions as an arterial, but has a "park like" and open quality. A parkway requires additional right of way and setbacks for landscaping and improved scenic quality.

Collectors: Collectors provide access and movement within residential, commercial, and industrial areas and typically have one to two lanes in each direction. The right-of-way and pavement requirements for collectors will vary depending on the land uses that they serve.

Locals: These streets provide access to land and are usually one lane in each direction. Right of way requirements vary significantly depending on location, environmental sensitivity and purpose.

Implementation 1: Periodically review and update the roadway network diagram.

Implementation 2: Support an evaluation by CALTRANS of a potential high capacity roadway west of I-880 serving Fremont's industrial area (State Route 61). Such a roadway should not have significant impacts on wetlands. In the interim, conserve right of way and require development of a westside roadway connecting, if feasible, to a comparable road in the City of Newark. Assess the potential for a through route to the Santa Clara County line.

Implementation 3: Support the development of an I-680 to I-880 connector. Continue to work with adjacent cities and any advisory committee towards construction of the connector.

Implementation 4: Preserve a transportation corridor under study from I-880 and Decoto Road to Mission Boulevard to meet the future transportation needs of Fremont residents.

Implementation 5: Review the need for extension Rancho Higuera Road to serve as a collector street. Review need for connection between Stevenson Boulevard Extension/Cushing Parkway and Fremont Boulevard.

Implementation 6: The need for a pedestrian and emergency access connection between Canyon Heights Drive and Morrison Canyon Road will be assessed and provided if needed.

Policy T 1.1.2: Continue to require new development to pay its fair share of roadway improvement costs.

Implementation 1: Continue existing program of street improvement as development occurs.

Implementation 2: Continue to update transportation impact mitigation structure to assure equity and meet expected transportation needs.

Policy T 1.1.3: Maintain roadways in good condition.

Implementation 1: Evaluate citywide roadway maintenance needs annually.

Implementation 2: Evaluate road construction standards to accommodate AC Transit buses.

Policy T 1.1.4: A roadway system within the historic community commercial centers should service these areas but not encourage through traffic that disrupts pedestrians, bicyclists and transit users.

Implementation 1: Implement the above policy by establishing appropriate roadway widths, design standards and traffic controls in proposed design and development plans for the City's historic community commercial centers in Irvington, Niles, Centerville and Mission San Jose. Roadway design standards in these areas may not be consistent with typical roadway standards for streets of similar classification elsewhere in the City.

Policy T 1.1.5: Permit construction and maintenance of private streets to preserve environmental or historic resources, to limit the environmental impacts of roads in sensitive areas, or to meet the unique needs of a parcel of land or project.

Implementation 1: Define and incorporate in the City's codes and development standards appropriate standards and conditions for private roads. Such standards should consider the need for adequate off-street parking, emergency access and the necessary minimum dimensions for roads and cul-de-sacs.

Implementation 2: Establish construction standards in regards to materials and maintenance so that private roads are of the same quality as public roads.

Implementation 3: Ensure through appropriate contracts and agreements the continued maintenance of private roads and traffic control devices.

OBJECTIVE T 1.2: **Smooth traffic flow on most arterials and collectors**

Policy T 1.2.1: Maintain a level of service "D," with a target Volume to Capacity ratio of .85 at major intersections, except where the achievement of such a level of service can be demonstrated to conflict with environmental, historic or aesthetic objectives or where regional traffic is a significant cause of congestion. LOS D may also not be achieved within the Central Business District.

Implementation 1: Identify intersections where a LOS below standard may be permissible and show them on the Circulation Diagram.

Implementation 2: Identify intersections where regional or inter-city traffic does not permit the City to adhere to the Level of Service standard.

Policy T 1.2.2: Limit access to parkways and arterials to maintain capacity, efficiency and safety of traffic flow.

Implementation 1: Update development policies concerning driveways and medians to be consistent with this policy.

Policy T 1.2.3: Coordinate traffic signals to provide smooth vehicular flow on arterials.

Implementation 1: Expand the number of intersections controlled by the City's master traffic signal computer.

Policy T 1.2.4: Work closely with other jurisdictions responsible for roadways within Fremont and those which feed directly into Fremont's street network.

Implementation 1: Work with CALTRANS and the Alameda County Transportation Authority to achieve timely construction of programmed freeway and interchange improvements.

Implementation 2: Work cooperatively with neighboring jurisdictions to ensure comparable plans and roadway development standards, and ensure sufficient capacity on the mutual roadway network.

Implementation 3: Review environmental impact reports for proposed developments in the vicinity of the City. Report potential significant impacts and recommended action to Council.

Policy T 1.2.5: Divert regional traffic from local roads.

Implementation 1: Support improvements to the regional traffic network which will divert a significant amount of traffic from local roads, consistent with the environmental, biological and other goals and objectives in this General Plan.

Policy T 1.2.6:v c Discourage through traffic on local streets.

Implementation 1: Monitor problem areas in response to neighborhood complaints. Recommend possible changes in the circulation system or in traffic enforcement procedures to reduce the problem.

Policy T 1.2.7: Consider metered entrances in Fremont to interstate highways unless there are significant negative impacts on City streets. The costs of metered entrances shall be borne by other agencies, and CALTRANS shall be responsible for their installation and maintenance.

Implementation 1: City staff will review any proposed ramp metering system and submit a report to City Council on its impacts.

Policy T 1.2.8: Provide adequate and convenient off-street parking to reduce the impediment of on-street parking to the efficient flow of traffic.

Implementation 1: Work with merchant groups and landowners in commercial centers to establish parking lots and structures where on-site parking is lacking. Consider the establishment of parking districts to finance such parking facilities.

Implementation 2: Periodically monitor off-street parking standards and regulations to ensure that they adequately address parking lot design, parking space dimensions and the amount of parking spaces necessary for the use.

Implementation 3: Evaluate need to expand enforcement programs to encourage adherence to parking regulations, especially at transit stops.

Implementation 4: Consider establishing parking requirements to provide for priority parking spaces for carpool vehicles.

Policy T 1.2.9: Consider grade separated rail-roadway crossings to improve traffic flow at critical intersections. Prior to approval, grade separated crossings shall be evaluated for their impacts on the character of commercial centers, on neighborhood character, on neighborhood quiet and on scenic vistas from designated scenic roads.

Implementation 1: Designate and prioritize critical rail-roadway crossings.

Implementation 2: Consideration shall be given to mitigating any negative impacts of grade separated crossings by evaluating the comparative impacts of alternative design approaches.

OBJECTIVE T 1.3: A system of truck routes that efficiently and safely move goods within the city

Policy T 1.3.1: A system of truck routes shall be maintained as shown in Figure 8-12, Planned Truck Route Map.

Implementation 1: Develop criteria for designation of truck routes and modify truck route map, if necessary to reflect those criteria.

Implementation 2: Monitor use of truck route system for level of usage and adequacy of routes to serve local truck needs.

Implementation 3: Continue to use roadway development standards for truck use.

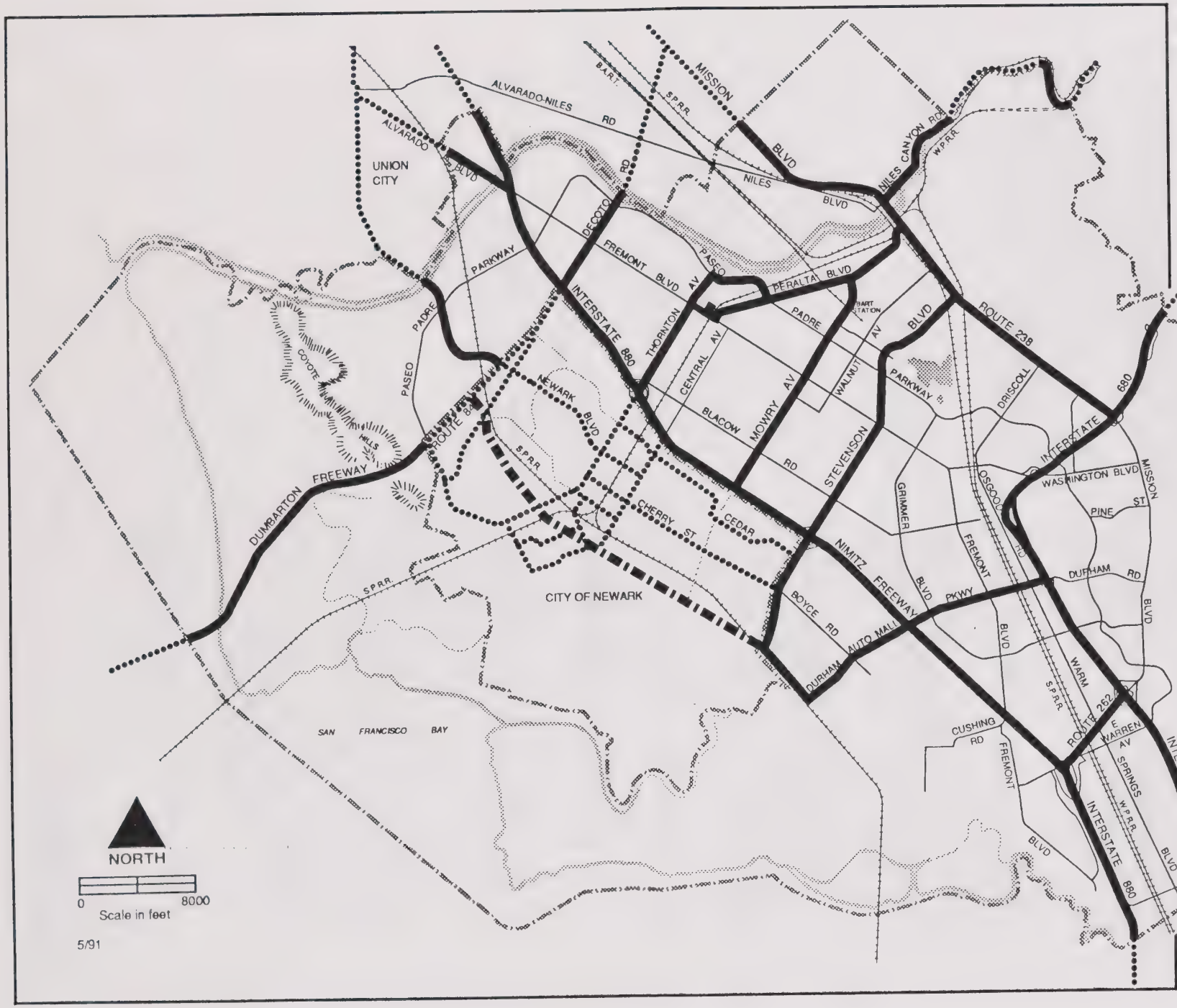
Policy T 1.3.2: Encourage through truck traffic to use interstate highways rather than local truck routes in Fremont.

Implementation 1: Monitor truck traffic in the City and continue to enforce existing truck route regulations

Implementation 2: Encourage the development of an I-680 to I-880 freeway connector.

Policy T 1.3.3: Protect neighborhoods from intrusion by truck traffic

Implementation 1: Include in "truck route designation criteria" the prohibition of the use of residential streets.



FREMONT GENERAL PLAN

PLANNED TRUCK ROUTES

Truck Routes within city limits of Fremont

Adjacent Truck Routes

Highway/Arterial under study

FIGURE 8-12

OBJECTIVE T 1.4: **A reduction (from 1990 levels, adjusted for growth) in the percentage of single occupant automobiles in traffic at peak times to high employment areas**

Policy T 1.4.1: Establish a program encouraging the use of transit, ridesharing and other alternatives to commuting by single occupant vehicle.

Implementation 1: Develop a Traffic Demand Management (TDM) program. The program can include the use of incentives to encourage employer participation. Monitor performance of the program.

OBJECTIVE T 1.5: **Participation in efforts to reduce regional traffic congestion**

Policy T 1.5.1: Coordinate local transportation planning with regional and other local plans.

Implementation 1: Review transportation plans of relevant neighboring jurisdictions. Continue working with Alameda County and other agencies in the development of a congestion management plan. Adopt elements of the plan as necessary.

Policy T 1.5.2: Work with other jurisdictions to develop solutions to regional congestion.

Implementation 1: Continue participation in studies such as the Fremont-South Bay Corridor study.

TRANSPORTATION (T) GOAL 2:
Convenient alternatives to the automobile to conserve energy, reduce congestion, improve air quality and provide a variety of transportation choices to meet a variety of needs

OBJECTIVE T 2.1: **A level of bus service providing a convenient and accessible alternative to the automobile**

Policy T 2.1.1: Support improved bus service within Fremont.

Implementation 1: Modify Fremont's Citywide Traffic Model to include the capability of evaluating the effectiveness of new transit lines, service frequency changes and fare changes.

Implementation 2: Evaluate AC Transit's expanded service plan to determine whether it meets Fremont's needs. If the plan would improve service, actively support the plan before the AC Board and prospective funding agencies (MTC, etc.).

Policy T 2.1.2: Support a regional bus system serving commuters.

Implementation 1: Encourage continuation of express bus service to the Peninsula.

Policy T 2.1.3: Consider modifying street design standards and development requirements to provide transit-supportive facilities such as bulbs, passenger shelters, benches, lighting, etc.

Implementation 1: Work with AC Transit to identify roadway design that would better accommodate bus transit. Consider modifying current road standards accordingly.

Implementation 2: Consider amending the traffic impact mitigation program to include allocations for transit facilities developed or approved by the City of Fremont.

Implementation 3: Work with AC Transit in establishing bus stops.

Implementation 4: Require the provision of transit amenities in new development where appropriate, and require the improvements as condition of project approval.

Implementation 5: Modify urban design regulations, zoning and other ordinances, standards and design review procedures to encourage maximum feasible transit accessibility.

Implementation 6: Consider modifying street improvement standards to better facilitate transit.

OBJECTIVE T 2.2: Convenient and attractive rail service to serve Fremont residents, workers and businesses as a viable alternative to the automobile

Policy T 2.2.1: Encourage the development of rail systems serving Fremont residents, workers and businesses.

Implementation 1: Actively support BART extension to the southern part of Fremont, with stations in Irvington, Warm Springs and South Fremont.

Implementation 2: Work with BART in support of extension into Santa Clara County.

Implementation 3: Participate in studies, such as the Auburn/Sacramento/Oakland/San Jose (ASOS) Study and Dumbarton Commute Service, related to the provision of passenger rail service to Fremont. Identify potential train station sites and designate on General Plan Land Use map, if appropriate. The general location of train station sites are identified on the land use maps.

Implementation 4: Work with other agencies to acquire abandoned rights-of-way and to preserve rights-of-way and track structure for future transportation corridors.

Policy T 2.2.2: Support County, State and Federal legislation to develop rail service as an alternative to the automobile.

Implementation 1: Adopt resolutions where appropriate in support of legislation and funding for rail service.

Policy T 2.2.3: Consider need for future transit right-of-way when designing new or modifying existing roadways.

Implementation 1: Identify potential future transit/rail corridors. Consider modifications to city street standards for those corridors to preserve options for future transit use.

OBJECTIVE T 2.3: **Easy transfer from one type of transportation to another to promote the use of alternatives to the automobile**

Policy T 2.3.1: Encourage inter-transit agency coordination to facilitate interconnections.

Implementation 1: Work with public and private transit providers to coordinate their schedules and ticketing.

Policy T 2.3.2: Provide facilities for transfers between different types of transportation.

Implementation 1: Determine the need for additional or expanded Park and Ride lots. Work with CALTRANS to identify additional sites. Consider alternative City actions to assist CALTRANS in providing these facilities.

Implementation 2: Encourage AC Transit to modify the bus staging area at the current Fremont BART station site to facilitate time transfers.

Implementation 3: Encourage future rail transit facilities to include inter-modal transfer facilities. Consider alternative City actions to assist in providing for such facilities.

OBJECTIVE T 2.4: **A safe and convenient bicycle network that facilitates bicycle travel for commuting to work, school, shopping and for recreation**

Policy T 2.4.1: Complete the bicycle route system identified on the Planned Bicycle Route, Horse and Foot Trails map (Figure 8-13).

Implementation 1: Develop a priority list for planned public improvements, emphasizing bicycle route connections.

Implementation 2: Periodically review and update bicycle route map to show where improvements have been made, and to identify new priorities.

Implementation 3: Amend street improvement ordinance to require dedication and construction of bicycle routes as indicated on the bicycle system diagram.

Implementation 4: Provide for bicycle safety in the design of interchanges where crossings are shown on the bicycle route diagram.

Implementation 5: Where conflicts arise between critically needed parking spaces and bicycle lanes, consider changing bicycle routes, prohibiting parking during peak hours, or developing off-street parking. If necessary, consider prohibiting parking where it would obstruct bicycle routes.

Policy T 2.4.2: To increase bicycle safety, the bicycle system shall consist of on-road striped bicycle lanes and off-road bicycle trails, whenever feasible.

Implementation 1: Continue use of state standards for construction of bicycle lanes and bicycle trails, at a minimum.

Policy T 2.4.3: Promote bicycle travel.

Implementation 1: Along bicycle routes, provide bicycle route signs that indicate major destinations.

Implementation 2: Make available to Fremont households and businesses an easy to use bicycle route map.

Implementation 3: Continue to maintain adequate sweeping and pavement repairs on bicycle routes.

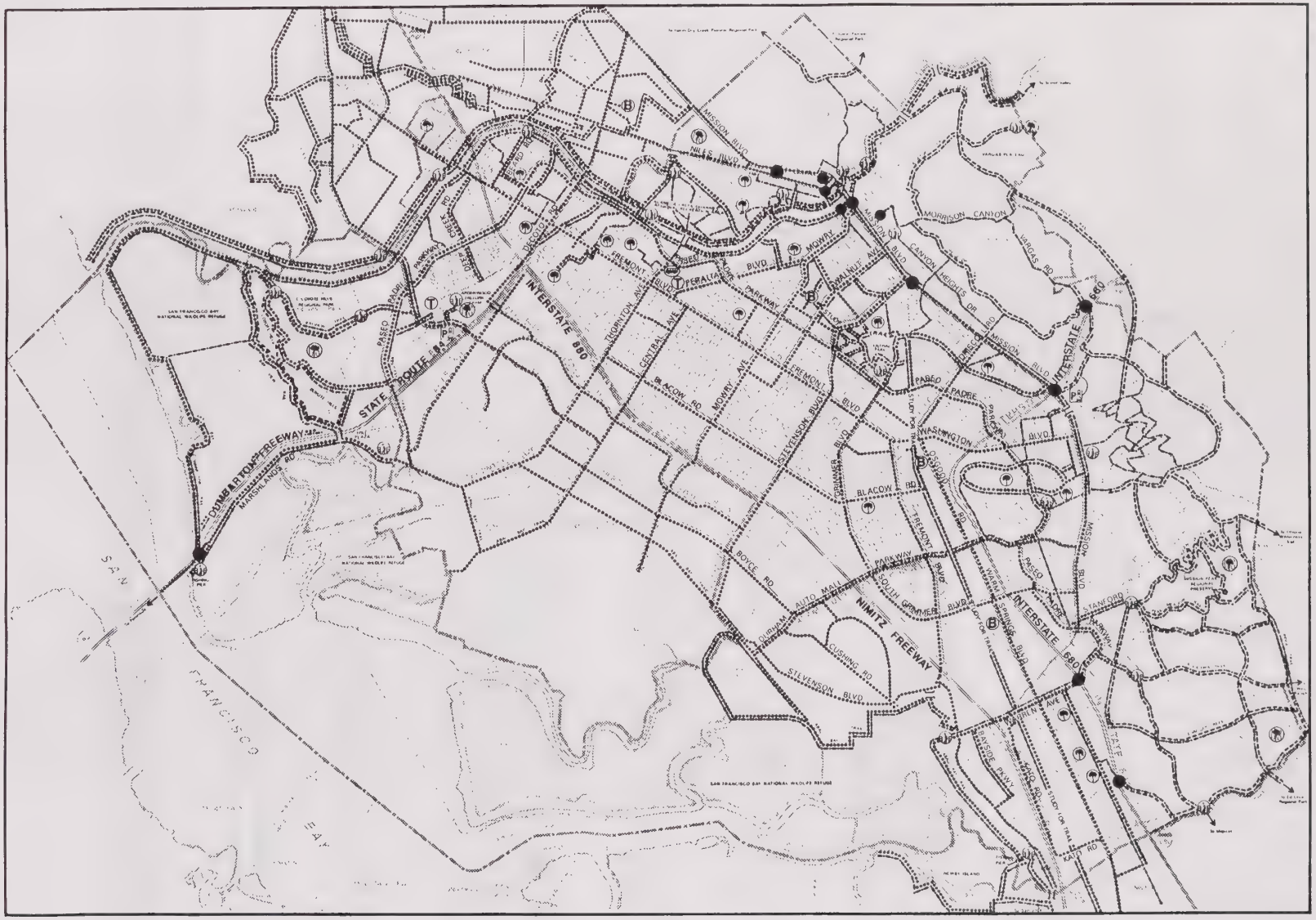
Implementation 4: Monitor bicycle accident levels and recommend safety improvements where needed.

Implementation 5: Amend the zoning code to require adequate and secure bicycle parking facilities at all new or substantially modified commercial or industrial development projects, educational and recreational facilities, and transit centers.

Implementation 6: Work with Alameda County, Newark, Milpitas, San Jose and Union City to coordinate bicycle routes.

Implementation 7: Work with ABAG to coordinate connections between Fremont's bike system and ABAG's Bay Trail.

Implementation 8: Consider the establishment of bicycle safety measures, either sponsored by the City or jointly sponsored with the school district or other appropriate organizations.



FREMONT GENERAL PLAN

PRELIMINARY DRAFT

BICYCLE FACILITIES, FOOT AND HORSE TRAILS

LEGEND

- BICYCLE FACILITIES
  - Bike Lanes: Lanes to paint generally on the edge of a roadway identified by special lane lines and sometimes other pavement markings
  - Bike Routes: Roadways designated as bike routes identified by Bike Route signs and parking prohibition signs
  - Bike Paths: Special pathways completely separated from motor vehicle traffic by space or physical barriers. They are usually identified by signs and may also have pavement markings. Bike paths may in some cases be open to use by pedestrians
- FOOT TRAIL
  - Sidewalk Foot Trail (See standards details)
  - Hiking Foot Trail (See standards details)
- HORSE TRAIL
- B.A.R.T. STATION
- BICYCLE/PEDESTRIAN UNDERPASS
- TRAILHEAD
- BICYCLE/FOOT BRIDGE
- TRAIN STATION
- BUS STATION
- PARK AND RIDE
- CITY PARK
- EAST BAY REGIONAL PARK DISTRICT

CITY OF FREMONT BOUNDARY

SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

Note: Information outside city boundary for informational purposes only. Newark, Union City and Milpitas trail routes obtained from respective city trails maps.

0 2000 4000

NORTH

BASE MAP DATE MAY, 1989
TRAIL MAP DECEMBER 1990

FIGURE 8-13

OBJECTIVE T 2.5: Transportation services for elderly and handicapped persons unable to use conventional transit service

Policy T 2.5.1: Support the provision of demand responsive taxi and van service ("paratransit") and other transportation services for those unable to use conventional transit.

Implementation 1: Regularly assist transit agencies and/or organizations in conducting a needs assessment to evaluate level of demand and sufficiency of current service.

Implementation 2: Continue to support a para-transit program sufficient to meet identified need.

Implementation 3: Consider amending impact mitigation program to allocate fees for paratransit service.

Policy T 2.5.2: Encourage developers and operators of elderly housing to provide convenient transportation for their residents.

Implementation 1: Evaluate the feasibility of a shuttle system connecting elderly housing with other senior facilities, shopping, recreation, medical and public facilities. Evaluate potential sources of support for such a system, including economic incentives.

OBJECTIVE T 2.6: A pedestrian walkway system in community commercial centers, in the Central Business District, neighborhood shopping centers and serving major transit facilities

Policy T 2.6.1: Develop convenient, continuous walkway systems in the community commercial centers.

Implementation 1: Pedestrian walkway systems shall be identified as part of neighborhood and community commercial center design and development plans called for in this General Plan (see Land Use Chapter). Such plans shall include

appropriate landscaping and street furniture requirements for walkways. Landscaping along pedestrian pathways should reduce wind, provide shade, and stimulate interest.

Implementation 2: Prior to the development of design and development plans, continuous pedestrian walkways shall be provided in new developments and when there is significant modification of existing developments. Those walkways shall link building entrances to street sidewalks and crossings and transit stops, and to adjacent building entrances and activity centers where appropriate. See Land Use Chapter under Community Commercial Centers for further discussion and implementation measures.

Policy T 2.6.2: Central Business District developments shall provide safe, convenient and continuous pedestrian connections and esplanades as illustrated in the Central Business District Conceptual Pedestrian System Diagram (Figure 8-14).

Implementation 1: Developments shall provide for pedestrian circulation. Elements of the system shall be provided in new projects or in existing projects when significant modifications are made in the development.

Implementation 2: The City shall provide appropriate pedestrian roadway crossings to facilitate pedestrian travel as identified on the CBD pedestrian plan.

Implementation 3: The Conceptual Central Business District Pedestrian System Diagram shall be more specifically delineated and updated when a design and development plan for the CBD and a proposed core area is developed, as discussed in the Land Use Chapter.

Policy T 2.6.3: Develop walkway systems to serve BART stations.

Implementation 1: The City shall, in cooperation with BART, establish walkway plans to serve the existing and proposed BART stations. Adequate walking access shall be considered an important element of new station design.

Source: City of Fremont; Community Development Department, May 7, 1991

FIGURE 8-14

FREMONT GENERAL PLAN

CBD CONCEPTUAL PEDESTRIAN SYSTEM DIAGRAM

- Inter-block Pedestrian Connection
- Inter-building Pedestrian Connection
- Street Crossings at Intersections
- Transit Stop
- Esplanade
- Transit Route (subject to change)

Implementation 2: After BART walkway plans are adopted, new projects or projects undergoing significant modification shall be required to provide public access as identified in the adopted walkway plan.

Policy T 2.6.4: Require the provision of pedestrian walkways in all developments, including older industrial areas. Walkways shall be required on both sides of all public streets.

Implementation 1: Continue to require developers to finance and install pedestrian walkways in future developments.

Implementation 2: In hill area developments, continue to permit the use of other than conventional concrete sidewalks along residential streets in order to enhance the rural setting.

Implementation 3: Modify existing street improvements standards to require walkways on both sides of all public streets. Establish standards for walkways on private streets which allow for safe pedestrian travel.

Implementation 4: Require the provision of walkways in neighborhood commercial centers linking building entrances to street sidewalks and crossings, and linking building entrances to adjacent building entrances and activity centers, where appropriate.

TRANSPORTATION (T) GOAL 3:
Transportation facilities and corridors that enhance the City's identity, and especially its historic, visual and natural resources

OBJECTIVE T 3.1: **Transportation facilities and corridors that enhance community and City identity**

Policy T 3.1.1: Provide street improvements and facilities that enhance neighborhood, district and City identity.

Implementation 1: Develop and adopt design guidelines and standards for soundwalls, street lighting fixtures, landscaping and street furniture for scenic routes and arterials. Design standards should enhance the unique identity of the City's districts.

Implementation 2: Develop and construct gateway features and identified gateway areas (see Land Use Chapter) to distinguish Fremont from neighboring cities and enhance Fremont's image.

Implementation 3: Transportation facilities and design shall conserve identified historic structures, sites and landmark trees whenever feasible.

Policy T 3.1.2: Require transportation facilities that aesthetically complement their built and natural environment.

Implementation 1: Work with transportation providers like BART to develop station designs which complement the areas in which they are located.

Implementation 2: The BART extension shall be trenched, covered and sound insulated under Central Park and shall be grade separated along with the existing railroad.

Implementation 3: Review proposed transportation facilities in relation to identified wetlands. Identify alternative alignments that

would avoid disruption of wetlands and/or mitigations for wetlands disruption.

Implementation 4: Design standards for Hill Planning Area roads shall minimize scarring of the hills and especially the Hill Face, as discussed in the Land Use Chapter (see Hill Planning Area).

Implementation 5: Implement policies and program related to Scenic Routes as discussed in the Visual Resources Section of the Natural Resources Chapter.

Policy T 3.1.3: City roadway-to-roadway grade separations shall ordinarily not be allowed in historic areas, community commercial centers and residential areas. All grade separations shall be treated with sensitivity to the pedestrian environment, the visual character of the area, and the noise environment.

Implementation 1: Grade separations shall be evaluated for their impacts on the visual character of an area. Facilities for pedestrians and bicyclists shall be incorporated whenever feasible in roadway to roadway grade separated facilities.

Chapter 9
Natural Resources

INTRODUCTION

A city, by definition, is a place where urban development occurs. Such development substitutes a man-made environment for the natural environment. While some changes are inevitable, with appropriate consideration, the negative impacts of people on the natural environment can be reduced. Conserving and incorporating the natural environment into the urban environment permits the enjoyment of nature thereby increasing the quality of life enjoyed by community residents. Protection of such natural resources as air and water quality are also important to the health of residents and employees, both current and future.

This chapter describes the natural resources in the City of Fremont and the City's plans for conserving them. The following resources are considered:

Biological
Mineral
Soil
Water
Energy
Air
Scenic and Visual

Each subsection of the chapter is divided into two parts:

- **Setting:** a description of the current conditions related to the natural resource;

- **Projection:** expectations regarding future conditions related to the resource; finally,

At the end of the Chapter, the goals, objectives, policies and implementation measures to conserve the City's natural resources are presented.

BIOLOGICAL RESOURCES

Biological resources are the living elements of the City's environment including all plants and animals. This section focuses on the non-human biological environment, and especially on the "natural" environment -- those areas of the landscape not fully managed as part of developed areas.

Setting

Fremont has four distinct physical areas: baylands, lowlands, flatlands and hills (Figure 9-1). Each of these physical zones can be further subdivided into ecological or "Habitat Zones" (Figure 9-2). Within these zones are unique biological resources that do not fit into any broad definitions of the area's characteristics. These biological resources are identified on Figure 9-3.

While each ecological zone has been significantly altered by urban development, each still includes some of its original habitat characteristics and each supports a diversity of plant and animal species.

Some of the plants and animals found in Fremont are classified as endangered or threatened or candidates for listing by the Federal and/or State government. Endangered species are defined as those plant and animal species seriously in danger of becoming extinct. Threatened species are those likely to become endangered in the foreseeable future unless protective actions are taken. Candidate species are those which may face extinction but for which additional information is still needed for a final determination.

Each of the three physical zones is described below, with additional information presented in the Biological Resources Background Report to the Fremont General Plan.

Baylands

Fremont's baylands are an internationally important natural resource due to their importance in supporting birds migrating along the "Pacific Flyway," a migratory route encompassing the entire Pacific region of the Northern Hemisphere. The baylands are also the home of several endangered species, including the California Least Tern, Salt Marsh Harvest Mouse and California Clapper Rail.

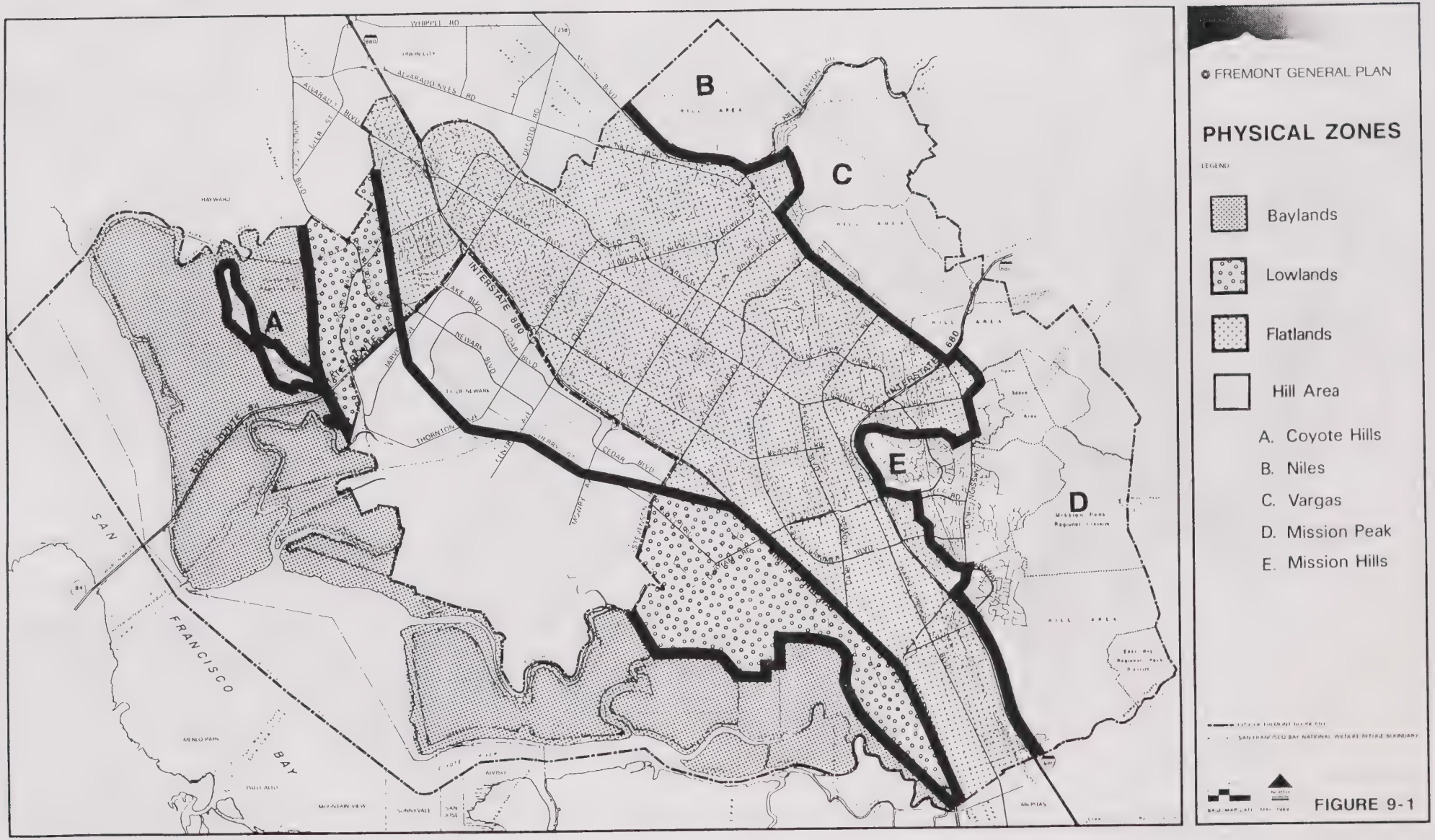
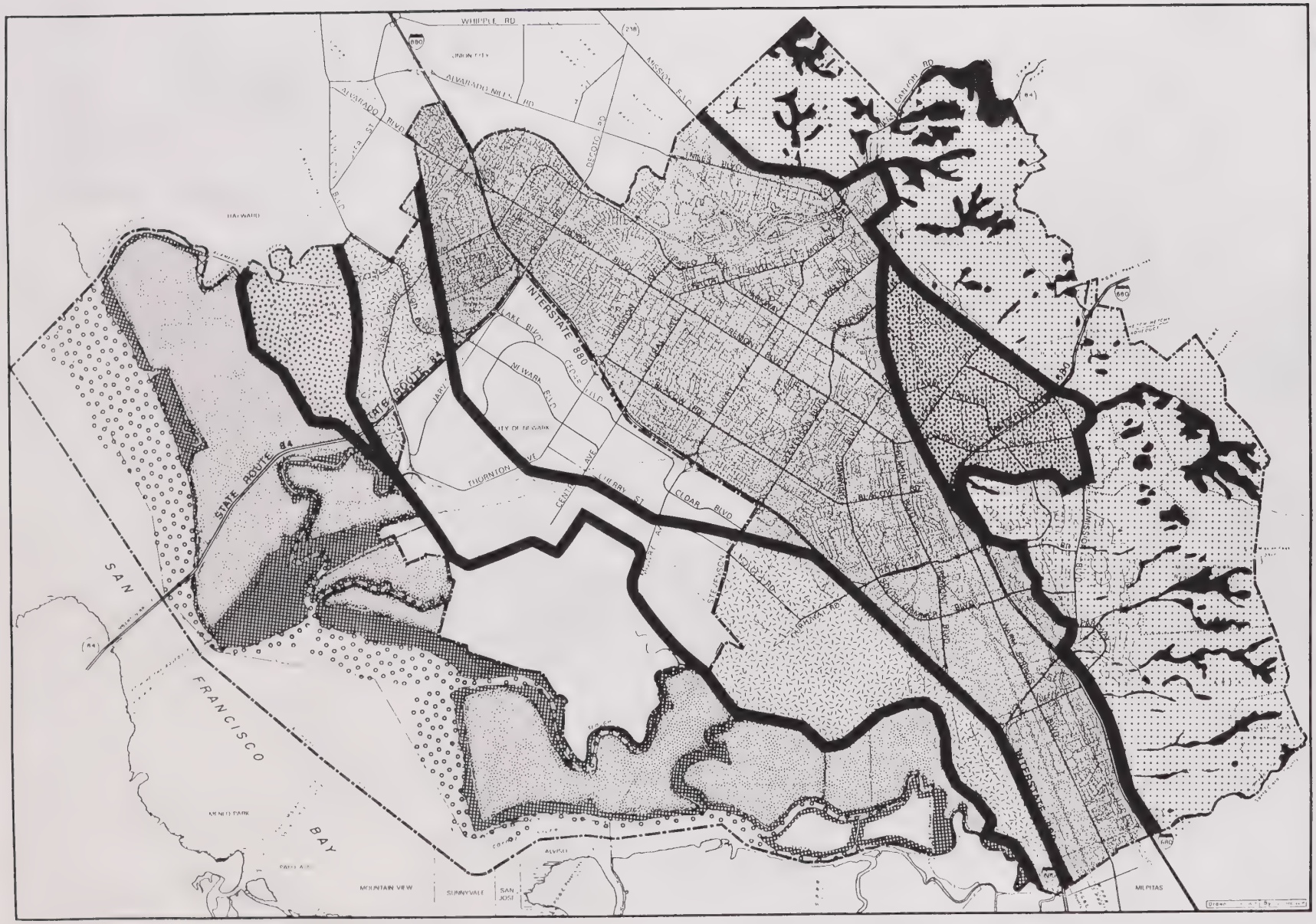


FIGURE 9-1

ACFCWCD Revegetation Manual, Harvey and Stanley, 1983
Hill Areas, COF, Res. 2302, 1969



FREMONT GENERAL PLAN

HABITAT ZONES

- Open Water
- Tidal Mudflats
- Tidal Saltmarsh
- Saltponds
- Brackish Marsh
- Coyote Hills and Freshwater Marsh
- Wetland-Lowland Transition
- Alluvial Plain
- Low Uplands
- Hill Grassland, Shrubland and Woodland

CITY OF FREMONT BOUNDARY

SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

BASE MAP DATE MAY 1989

FIGURE 9-2

ACFCWCD Revegetation Manual, Harvey and Stanley, 1983
USFWS, National Wetland Inventory, 1985
Hill Areas, COF, Res. 2302, 1969


FREMONT GENERAL PLAN
UNIQUE NATURAL AREAS IN FREMONT'S FLATLANDS
1 Lake Elizabeth and Central Park
2 Tyson's Lagoon
3 Alameda Creek Quarries
4 Ardenwood Regional Preserve
5 California Nursery
Historic Plantings
Riparian Areas
Riparian Areas (creeks)
CITY OF FREMONT BOUNDARY
SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY
NORTH
BASE MAP DATE MAY, 1989
STATE ROUTE 84
INTERSTATE 880
INTERSTATE 680
NIMITZ FREEWAY
SAN FRANCISCO BAY
ALVARADO NILES RD
NILES BLVD
ARGONNE BLVD
LAKE BLVD
NEWARK BLVD
THORNTON AVE
CENTRAL AVE
CHERRY ST
CEDAR BLVD
STEVENSON BLVD
DURHAM AUTO
BEAMONT BLVD
PARKWAY
ALVISO
MENLO PARK
PALO ALTO
MOUNTAIN VIEW
SUNNYVALE
MILPITAS

FIGURE 9-3

Within the baylands are six distinct habitats: 1) Open water and sloughs, 2) tidal mudflats, 3) tidal wetlands, 4) saltponds, 5) brackish marsh and 6) Coyote Hills and freshwater marsh (Figures 9-3). The vast majority of Fremont's baylands are incorporated in the San Francisco Bay National Wildlife Refuge which includes over 18,600 acres in the South Bay, approximately half of which are in Fremont. Another 24,000 acres have been identified for incorporation into the Refuge throughout the south Bay (2,300 acres in Fremont), as funding permits. The Coyote Hills and freshwater marshes are within the Coyote Hills Regional Park.

Open Water

Fremont's city boundaries extend into San Francisco Bay. The Bay is habitat for 70 to 100 species of fish as well as a variety of shellfish, shrimp, crabs, and other marine life. Birds such as loons, grebes and cormorants feed in the South Bay's open waters. The waters of Mowry Slough support a harbor seal nursery. The open waters found in the mouth of the Alameda Creek Flood Control Channel attract steelhead (sea-run trout) to move upstream to attempt spawning.

Tidal Mudflats

Mudflats provide important feeding grounds for shore birds. Tidal mudflats are inhabited by a large number of algae and microscopic plants, as well as over 100 species of invertebrates. A number of mollusks such as mussels, clams and snails are also common and are critical sources of food for a diversity of bird species.

Tidal Wetlands (Salt Marshes)

Salt marshes are one of the most productive of natural communities. They usually occur at elevations slightly higher than tidal flats. Through tidal action, vast quantities of nutrients from marsh lands are passed to the mudflats to support Bay plants, fish and wildlife. In the city, most of the salt marsh is dominated by a solid, dense groundcover of pickleweed and cordgrass.

The marsh vegetation provides feeding and nesting areas for waterbirds. The endangered clapper rail is dependent upon salt marsh habitat for survival. The salt marshes of Fremont also support the endangered salt marsh harvest mouse. Salt marsh species persist in wetland transition areas where diking or other site modifications may have occurred.

Salt Ponds

Around South San Francisco Bay, diked lowlands have been used as evaporation ponds for salt extraction. These ponds are used by many species of birds for feeding. Nesting by threatened species such as the least terns occur on the levees and earth islets. Certain fish may also inhabit salt ponds when they are at relatively low salinity levels. Salt ponds have lowered habitat values as salinity levels rise during the salt extraction cycle.

Brackish Marsh

Saltmarsh areas receiving freshwater take on brackish marsh characteristics. The salt component may be derived from tidal or soil sources. The endangered salt marsh harvest mouse and California Clapper Rail are found in brackish marsh habitat areas. Nearby uplands and riparian areas provide connections to upstream habitats. Some of the lower four miles of the Alameda Creek Flood Control Channel (Coyote Hills Slough) is brackish marsh influenced by estuarine waters of San Francisco Bay.

Coyote Hills and Freshwater Marsh

These arid grassy hills function as a barrier to bay winds and salt water and provide the setting for the only major freshwater marsh in the South Bay as well as vernal pools. This area is entirely within Coyote Hills Regional Park. Opportunity for creating freshwater marsh exists with future quarry reclamation adjacent to Coyote Hills. Endangered species typically found in this type of habitat include the California Least Tern and California Clapper Rail. These areas are also habitat for several species considered threatened.

Wetland Lowlands

The lowlands are a transition zone between the wetlands near the Bay and the flatland areas. Much of this area is underlaid by bay mud and include saline or alkaline soils or poorly drained clay and clay loam soils. Included in this transition zone are seasonal wetlands, vernal pools, salt pannes, freshwater and brackish marshes, slough headwaters and adjacent uplands.

This area is a single habitat zone with characteristics of both the baylands and flatlands. These lands are used for agriculture and has been used for duck clubs in the past. The Sanitary Landfill is considered to be within this habitat zone. Endangered species associated with this type of zone include the California Least Tern, Salt Marsh Harvest Mouse and the California Clapper Rail. Most of this area is developed or planned for industrial development. Areas planned for development will not consume habitat for the endangered species.

Flatlands

The alluvial flatlands of the Bay Plain of Fremont lie between the hills on the eastern side of the City and the baylands on the west. This is where most urban development in Fremont occurs; little of this area remains in its natural state.

The low upland terraces east of Central Park, around the Mission Hills and the base of the eastern Hill Area support a variety of habitats in the riparian corridors. Outside of some unique natural areas there are primarily two types of habitat areas: landscaped and grassland areas. These are described below.

Landscaped Areas

Landscaped areas include private gardens, corporate landscapes, parks, street landscaping and other public agency open spaces. These landscaped areas and the types of habitat they support are a significant departure from the grassland and fields that existed in Fremont prior to urban development.

The man-made landscape extends the habitat diversity found in the unique natural areas in the city and can be viewed as an extension of those habitats. This habitat supports mammals such as squirrels, raccoons, opossums, and over a hundred bird species, as well as lizards, snakes, insects and over thirty butterfly species. Domestic and feral (wild) cats and dogs are consumers of small mammals, birds, frogs, lizards and snakes.

Grassland and Fields

Annual grasses and plants such as flowering mustard are common in fallow areas within the City. In addition to non-cultivated grasslands, there are several remnant agricultural areas on prime farmland. Agricultural crops recently grown in Fremont include apples, corn, cauliflower, lettuce and gladioli. Many wildlife species are associated with these areas including ground squirrels, jackrabbits, snakes, lizards, and a variety of insects. Hunting birds (raptors) use these open grassy areas to search for prey.

The creeks in the flatlands are typically channelled and support vegetation subject to weed control. These flood control right of ways function as mini wildlife corridors, typically supporting snakes, lizards, small mammals, spiders and insects.

Unique Natural Areas in Fremont's Flatlands

There are several unique natural areas in Fremont's flatlands, almost all of which are in public ownership (Figure 9-3). All are semi-natural areas altered for flood control, mineral extraction, aquifer recharge or other purposes. These include the following:

Lake Elizabeth and Central Park. Lake Elizabeth is a major lake habitat. It supports bottom fish such as bass and catfish, a resident population of ducks and geese and a large migratory bird population including pelicans. The lake supports some recreational fishing. Much of the lake's shoreline is lined with riprap and has little or no vegetation; however, the eastern shore and island is vegetated with a variety of common freshwater plants. This shoreline marsh and island provides roosting and foraging habitat for coots, egrets and blackbirds.

The fallow fields on the margins of the developed parkland provide habitat for the burrowing owl, identified as a "species of special concern" by the California Department of Fish and Game. The owl uses ground squirrel burrows which are vulnerable to tillage.

The twenty acre freshwater marsh and riparian woodland adjacent to the Lake provides a rich habitat for 60 - 100 species of birds and common urban wildlife such as skunk, opossum, raccoon and rabbits.

The lake functions as a major component of Fremont's flood control system and is subject to loss of water quality from excess nutrients concentrated in stormwater and the stagnant nature of its water retention function. The adjacent marsh receives drainage from Mission Peak and is prone to siltation and to loss of habitat values due to algae growth and a resultant loss of oxygen in the water.

Tyson's Lagoon. Tyson's Lagoon, originally a single freshwater marsh, is a wetlands and pond area located adjacent to the Fremont BART station and divided by Walnut Avenue. These tule ponds are owned and managed by the Alameda County Flood Control and Water Conservation District (ACFCWCD) as water retention ponds for flood control purposes. These ponds support a wide variety of waterfowl and other plant and animal species in the open pond, shrub and woodland habitats.

Alameda Creek Quarries and Niles Community Park. The Alameda Creek Quarries are an especially varied habitat. Almost all of the quarries are jointly owned by the Alameda County Water District and the East Bay Regional Park District. The quarries are critical groundwater recharge facilities (see Water Resources section of this Chapter) as well as important wildlife habitat.

The quarries include several types of vegetation areas, including riparian woodland, freshwater marsh, grassland, brushland and areas of introduced species from old homesites. Several animal species classified as threatened are found here. Many migratory birds including both wildfowl and smaller birds use this habitat.

Ardenwood Regional Preserve. Major habitat components are the landscaped areas, row-crops, old orchards and 34 acres of eucalyptus species. Native riparian species are also scattered on the site. Animals include blacktail deer, gray fox, fox squirrel, common snakes and toads, small migratory birds, hawks and turkey vultures. The eucalyptus provide a suitable environment for Monarch Butterflies and perching sites necessary for raptors and vultures. Open fields and marshlands provide their main hunting range.

There are no known endangered species on the site. Landmark trees on the site include several Eucalyptus species, Dawn Redwood, and other historic plantings.

California Nursery. This major urban forest contains over a hundred specimen trees as well as dozens of unique landmark trees. This area provide important roosting and nesting habitat for large birds.

Other Historic Plantings. The City has established criteria for trees to be considered "Landmark Trees." Among those criteria are size, age and historical significance. Concentrations of identified Landmark Trees are found in the subdivisions around the California Nursery, Shinn Park, and Patterson House in Ardenwood. Landmark Palms and olive trees are found in Mission San Jose and in the several old cemeteries. These are valuable components of the City's historic landscape.

Riparian Areas. Riparian areas are a water course (either perennial or intermittent), lake, pond or other wetlands and the associated vegetation. Alameda Creek Flood Control Channel is a significant wetland habitat. Other creek zones include portions of Mission Creek.

Hills

The hills of Fremont rise from the Bay Plain in the east of the City. The hills support three major habitat areas: grasslands, shrubland and woodland. The shrub and woodland communities are typically found on slopes with northern aspects and in canyons. Each is briefly described below.

Grassland

Grasslands consist of annual grasses and forbs, with occasional shrubs such as Coyote brush and poison oak. Most of these annual grasses were introduced after European settlement; native bunchgrasses have been overgrazed and are no longer dominant.

Grassland offers little in the way of roosting or nesting habitat for wildlife, but provides foraging and hunting ground for a large number of bird species. Grasslands are also an important grazing resource for cattle (see Soil and Agricultural Resources section) and deer. Burrowing rodents, several snake species and ground-nesting birds are also found in the grasslands areas. The Alameda whip snake, a species listed as threatened by the State of California, is typically found in hilly grassland areas in Alameda County.

Shrubland

Compared with grasslands, the shrubbed portions of the hill area are less common and are valuable for the cover and forage they provide small animals in the vicinity of creeks in swales and canyons. Several bird species frequent shrub-dominated areas, and several animals are associated with this habitat, including the jackrabbit, pinon mouse, spotted skunk, snakes, lizards and tarantula.

Woodland

Wooded areas are widely scattered throughout the hills, characterized by relatively moist, sheltered and shaded habitats. These include riparian woodlands associated with stream bottomlands such as Niles and Morrison Canyons, and along Mill Creek, Mission Creek, and various other canyons in the hills. There are two stands of Bluegum eucalyptus in the Hill Area (on Vargas and Stanford Roads) and a mix of redwoods and eucalyptus in the Kimber subdivision.

Woodlands can be characterized by three types: 1) oak woodland; 2) broadleaf evergreen forest, and 3) riparian woodland. In most cases, these zones intergrade with each other. Scattered oaks are also found in grassland areas. A wide variety of wildlife use these woodland areas, including several species of mammals, reptiles and birds.

Baylands

The Wildlife Refuge has incorporated, or expects to incorporate almost all of the baylands wetland habitat as well as some parcels in the lowland area. However, funds for Refuge expansion are being made available by the Federal Government in relatively small increments. At expected levels of disbursement, funds to purchase all identified sites would not be available for twenty years or longer. In the interim, development could proceed on some sites identified for potential acquisition,

Wetland Lowlands

Most of the lowland area is planned for industrial or other development. Some lowland areas adjacent to wetlands are proposed for incorporation in the Wildlife Refuge. However, as noted above, it could be several years before sufficient funding is available to purchase identified sites. In the interim, development could proceed on some identified sites identified for purchase. Appropriate mitigations will be needed to minimize the impact of development on adjacent wetlands. In addition, some lowland areas have seasonal wetlands and vernal pools. Preservation or mitigation of wetland impacts will be necessary.

Flatlands

Over time, the amount of undeveloped area within Fremont -- landscaped, grasslands and fields -- will diminish. The importance of open areas within the City to protect biological resources will increase as the City becomes more densely developed. Land that is not today managed for its biological resource values (such as drainage ditches, flood control ponds and open meadows) could be managed for this purpose in the future, thereby protecting the City's biological heritage and its connections to its natural environment.

Pressure for other use of publicly owned natural areas is also likely to increase due to increased recreational demand and pressure to utilize available open space for more active uses. Increased use and modification of natural areas would reduce their habitat value.

The proposed BART extension is expected to have significant impacts on the marsh area on the south side of Walnut Avenue. While BART and the Flood Control District (which owns these drainage areas) have previously preserved the flood control purposes of these marsh areas, additional effort should also be extended to preserving habitat values in the future.

Similarly, the need to protect the biological values of the Alameda Creek Quarries should be an important consideration in the design of the proposed recreation area.

Hills

The Mission Hills are largely developed, with a few remaining semi-natural riparian corridors that have been preserved, as well as some grassland and woodland habitat areas. Limited additional development is likely to continue in this area leading to some additional loss of primarily grassland habitat.

The Hill Face of Fremont is protected by the Hill Area initiative from development which would have a significant impact on its habitat values. The golf course proposed for an area at the base of Mission Peak should be developed in a manner sensitive to the habitats and general character of the hills.

The Eastern Hill Area includes the area east of the visible ridgeline. This General Plan calls for a two-step process for determining the level of potential development in this area, as described in the Land Use Chapter.

Mission Hills West. Although this area is largely built out, much of the sloped land is included in dedicated open space or the undeveloped Antelope Hills trail park. The open areas include non-native grassland and live oaks, buckeyes, toyon, poison oak and coyote brush in the north canyon area. Some additional low density residential development, and a small office and neighborhood commercial area is permitted on the boundary of this area.

MINERAL RESOURCES

This section of the Natural Resources Chapter discusses mineral deposits in Fremont. The major mineral resources found in Fremont are sand and gravel, stone, salt, mineral water and related resources. All identified mineral resources in Fremont are common; there are no significant amounts of "rare" or "valuable" minerals such as gold, silver or mercury.

Common mineral resources have importance to the City and to the region because many are vital to the economic activity of the Bay Area. Adequate supplies of some types of mineral resources at a reasonable cost support existing and future development. The importance of mineral resources must therefore be considered in relation to their market area as a whole as well as their importance to the City of Fremont.

The availability of some mineral commodities in urban areas is endangered by competing or incompatible land-uses. Land use decisions about mineral resource sectors must balance mineral resource values with other resource values such as protection of water resources, provision of land for jobs and housing and the protection of aesthetic or visual resources.

Construction Aggregate (Sand, Gravel, and Crushed Rock)

Construction activity in the state and Bay Area has made production of gravel from crushed and broken stone one of the oldest and most extensive mineral-related industries in California. The cost of transporting sand and gravel contributes to the importance of having sources close to markets. The primary source of construction aggregate in the Fremont region is Alameda Creek and its tributaries. The State estimates that reserves within this region will be depleted by 1999, after which aggregate will have to be imported from other regions.

Extraction activities in Fremont take place at three quarries. The permits for two quarries expire in 1990 and additional extraction activity is not expected. The third quarry (Dumbarton) is expected to complete its operations by 1997. Only this last quarry is within the special state mandated sectors discussed below.

The State's Mining Act was intended to implement two State policies related to quarrying mineral resources:

1. Operations are conducted to minimize adverse environmental impacts and result in a usable, safe landform when quarrying has ceased.

2. Production and conservation of existing and future supply of mineral resources while giving consideration to values related to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.

The State reviews local policies for quarries to determine whether the local quarrying policies are in conformance with Policy 1. The City's Quarry Overlay District was found to be in conformance with State law.

To implement the second policy, the Mining Act provides for a mineral lands inventory process. The State has designated six areas within Fremont as Regionally Significant Construction Aggregate Resource Sectors (Figure 9-4, Mineral Resources).

Each of these State designated areas are discussed below (the identification numbers are those used by the State).

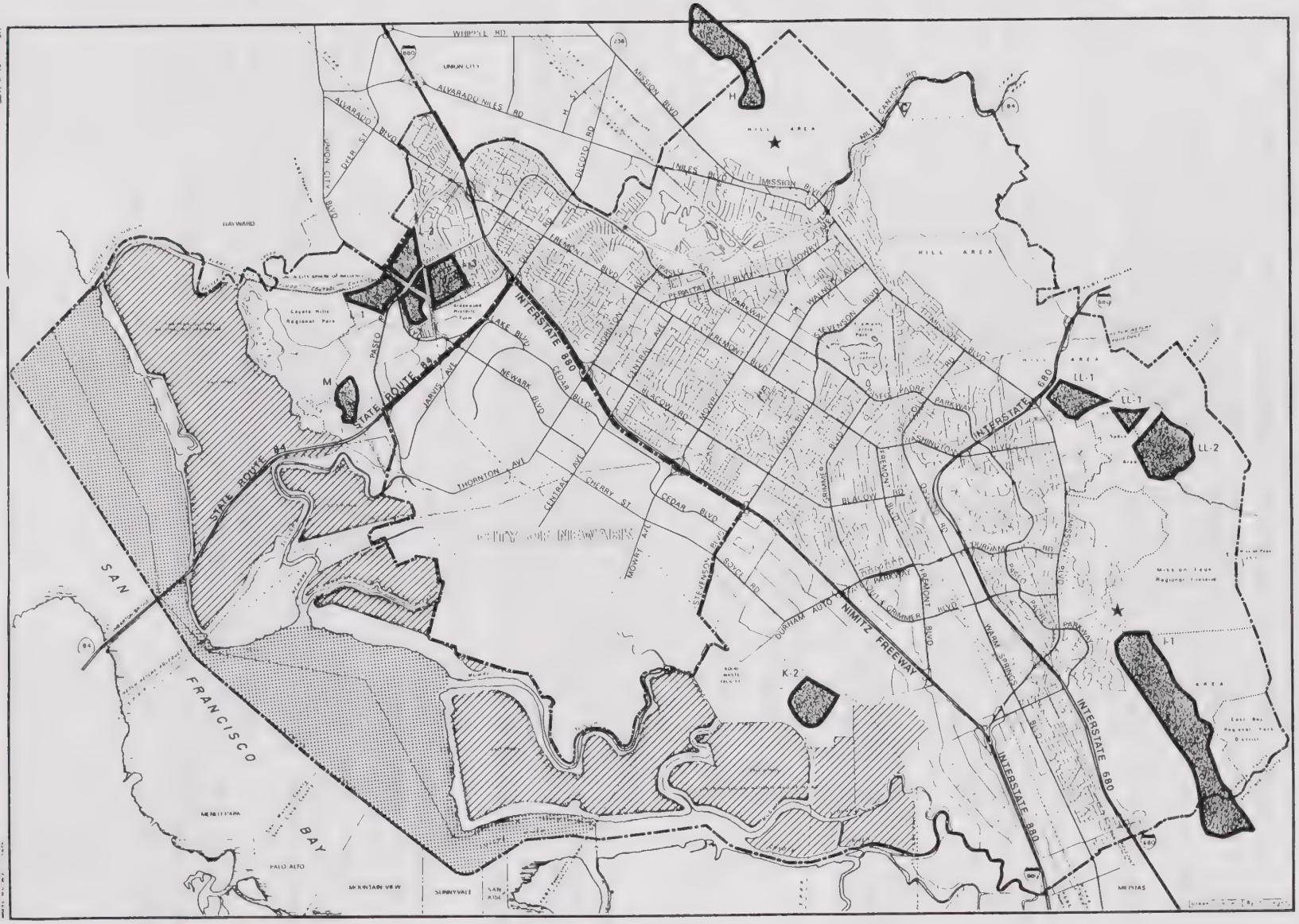
Sector H and Sector I-1, LL-1, LL-2. All of these sectors are located in various parts of the Hill Area of Fremont. Several sectors abut publicly owned parklands and regional preserves.

Sector K-2. This site is located west of I-880 on the southern edge of Fremont and is designated Industrial on the General Plan. Plans for an airport or industrial use of this sector are under consideration. In May 1988, the Army Corps of Engineers determined a significant portion of this area to

be seasonal wetlands under Corps jurisdiction. This sector is also adjacent to the San Francisco Bay National Wildlife Refuge.

Sectors L-1, L-2, L-3. These sectors are located in five parcels located between the Nimitz Freeway, Alameda Creek, the Coyote Hills and Highway 84 in the northwestern portion of Fremont. Some of these sectors are in the area commonly known as the Ardenwood Forest New Town and are developed or are under development with residential, commercial, and industrial uses. Part of one sector is in the Ardenwood Regional Preserve, an agricultural park and historic site. The remainder is designated Open Space or agriculture on this General Plan. All five sectors are over the Niles Cone, a complex of aquifers providing a major part of the area's water supply.

Sector M. This sector is an existing quarry known as the Dumbarton Quarry, located on the west side of Fremont.



FREMONT GENERAL PLAN

NATURAL RESOURCES SECTION

MINERAL RESOURCES

LEGEND

- STATE DESIGNATED REGIONALLY SIGNIFICANT CONSTRUCTION AGGREGATE MINERAL RESOURCE SECTORS
- CLAY PIT
- SALT PONDS
- AREA OF SHELL DEPOSITION
- HOT SPRINGS

SOURCE: STATE DEPARTMENT OF CONSERVATION
CITY OF FREMONT

CITY OF FREMONT BOUNDARY
SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

0 2000 4000

NORTH

BASE MAP DATE: MAY, 1989
MINERAL RESOURCES DATA: JANUARY, 1991

FIGURE 9-4

Salt

Salt ponds in Fremont and Newark account for 62.5% percent of the Bay Area's annual salt production of about 1.2 million tons per year (1989). Salt concentration ponds cover about 8,800 acres in Fremont.

Theoretically, future salt supplies are virtually unlimited. However, because salt has a relatively high transport cost, loss of sufficient supply near industrial operations could result in higher production costs or cutbacks in operations of businesses dependent on salt. The bulk of California's salt utilizing industry uses salt produced through solar evaporation, most of which is in the Bay Area. This dependence is likely to persist making local salt production a local and regional resource of considerable value.

Salt ponds are also an important wildlife habitat, as discussed in the Biology section of this Chapter. The National Wildlife Refuge, which includes nearly all of Fremont's salt ponds, allows continued production of salt through solar evaporation because the ponds blend well with the overall purpose of the refuge. Salt marshes and tidal flats - which the ponds have replaced in many areas - also provide important habitat for plant and animal life.

Other Mineral Resources

Other mineral resources in Fremont include clay, mineral springs and limestone deposits. Each is briefly discussed below.

Clay. No detailed Statewide information on clay deposits and potential resources is available, although large reserves of miscellaneous clay appear to be present. Fremont has had two sites where clay was traditionally quarried, although only one is currently in operation.

Mineral Springs. Fremont has two mineral springs which have been identified by the U.S.G.S. as having regional significance. One is in a canyon north of the Niles area and the other is at the historic Warm Springs Hotel-Stanford Winery complex in the Warm Springs area. Other hot springs may exist in Fremont along the Hayward fault corridor.

Limestone. The U.S.G.S. has identified large quantities of limestone located within the City limits beneath the Bay itself. Limestone is a critical component of cement production. According to USGS, the entire South Bay floor may be underlaid by quaternary sea shell deposits (limestone) to a magnitude of possible importance to the entire region. These deposits have been quarried in other portions of the Bay Area but are untouched in Fremont.

In considering the future management of mineral resources, the value of the resource must be weighed against social, environmental, and economic goals for the City. This General Plan calls for consideration to be given to the mineral resource values of a site in any land use decision requiring review by the Planning Commission or Council. In reviewing a quarry permit application, the City must consider the impacts on the environmental, economic and social goals of the City.

Construction Aggregate

Each of the sites identified by the State inventory is evaluated below in relation to other City policies, potential development and other constraints. These evaluations are not exhaustive but provide context for policy development in regard to the resource. Prior to any additional actions taken on an identified site, additional study and evaluation would be needed. All of the mineral resource sites currently designated Open Space in the General Plan have also a Mineral Resource Overlay designation. As noted above, the City will consider the resource in reviewing proposals for development that would affect the resource.

Sectors H, I-1, LL-1, LL-2. Development in much of the Hill Planning Area of Fremont is guided by a citizen adopted initiative permitting only very low density residential uses and strongly limiting the visual and environmental impacts of development. These policies will protect most of the identified mineral sites from significant encroachment by incompatible uses. However, the probable environmental and aesthetic impacts of quarrying would not be consistent with initiative adopted policies regarding protection of the character of the Hill Area (see Land Use Chapter). The impacts of a quarry operation on access roads, on water resources, and on existing park and public facilities would all have to be taken into account prior to permitting any mineral extraction activity.

Sector K-2. This site, west of I-880 in the southern part of Fremont is located in an area identified as potentially having seasonal wetlands. This area has been identified for potential acquisition by the National Wildlife Refuge. Any consideration of its use for mineral extraction would have to be considered in relation to its critical value as potential wildlife habitat and the impacts on adjacent nationally significant habitat areas.

Sectors L-1, L-2, L-3. Development in Ardenwood is guided by a development agreement adopted prior to the designation of the mineral sectors. The incompatible uses that have developed pursuant to that agreement will preclude future extraction activities in portions of the sectors. A portion of one sector is in the Ardenwood Regional Preserve and is thereby protected from incompatible uses. However, any extraction activities would face severe constraints due to its location in a regional park and historic site. The remainder of the sectors is designated Agriculture on the

General Plan. This designation should conserve the resource from incompatible uses in the near term.

Extraction activities in any of these sectors face severe constraints due to the presence of the Niles Cone, the groundwater system providing much of the potable water supply for the Tri-City area (Newark, Union City, Fremont). It is unlikely extraction activities could be conducted that could be guaranteed not to affect this vital water resource.

Sector M. This sector is the existing Dumbarton Quarry which is expected to be phased out by 1997 as the available aggregate is exhausted.

Salt

There is no indication of any change in the salt industry in Fremont. Due to the importance and value of salt extraction, the City should continue to encourage salt production. However, should salt production cease, the reconversion of salt ponds to salt marsh or other habitat should be considered a high priority.

Other Mineral Resources

Clay. As with other mineral resources found in Fremont, proximity to a large market in the Bay Area is of prime importance. The Bay Area's growth and vitality should continue to provide a ready market and keep this industry viable. However, the environmental impacts of clay extraction, the value of land, and the availability of sources in other locations may lead to the gradual phasing out of this mineral extraction activity in Fremont.

Mineral Springs. Mineral and possible energy values of these resources have not been identified. These resources should be fully evaluated for their mineral and other unique values prior to any significant modification in land uses which could prevent future access and/or use of the resource.

Limestone. Statewide limestone resources are considered sufficient for the long-term. Possible exploitation of Bay limestone resources is highly constrained. The Wildlife Refuge and the protection of water quality would be just two of the many issues requiring further analysis prior to any limestone quarrying being permitted in Fremont.

SOIL AND AGRICULTURAL RESOURCES

Soil is the layer of weathered rock, organic matter and sediment on the surface of the land. The resource value of soils is usually measured in regard to two of its properties: its ability to sustain the loads of urban development and its productivity as an agricultural resource. This section will begin by providing an overview of soils in Fremont, followed by a discussion of those two resource values.

More detail regarding the specific soils found in Fremont, including soils maps and a discussion of each soil type, is found in the Soils and Agricultural Resources Background Report.

Setting

There are four general soil categories in Fremont resulting from the combined influence of topography, parent material, water, humans, vegetation and climate: deep alluvial fan and floodplain soils, poorly drained valley basin soils, saline soils and alkaline valley basin soils. These soil types are further subdivided into different soil classifications. The Soil Conservation Service (SCS) of the U.S. Department of Agriculture is charged with evaluating soils for their characteristics. The following information is based on its analysis.

Agricultural Productivity

Different soils have different capabilities of sustaining agriculture. The chemical nature of the soil (e.g., alkaline or acid), its water holding capacity, the amounts of organic material, its slope and depth are all properties of soil which contribute to the types of agricultural practices it can support.

Soils are rated by SCS in a classification system from I to VIII based on their potential to support standard agricultural cultivation practices. Class I and II soils are unrestricted in their use for cultivation and are defined by SCS to be "prime soils". Class III and IV soils require special management practices, while Classes V - VIII are generally unsuited for cultivation. Class VI and VII soils can be suitable for some types of agricultural use, such as rangeland for livestock grazing.

One of the more important elements in the SCS classification system is the degree of slope. The Class I and II soils are found in areas with little or no slope, while other classes are found in areas with increasingly steeper slopes. U.S. Soil Conservation Service soil types are shown on the Soils map in Appendix A of the Natural Resources Background Report.

Prime Agricultural Soils. Most of Fremont's Bay Plain is prime agricultural land composed of Class I and II soils. Because prime agricultural soils are also often best suited for urban development, most of Fremont's prime soils

are now developed or planned for urban development. The last remaining intensively cultivated prime soils in Fremont (with the exception of nurseries) are found in the Northern Plain area on the publicly owned Ardenwood Regional Park Preserve, and on land remaining in the original "Patterson Ranch." These lands provide a wide array of produce, examples include hay, apples, pumpkins, corn, citrus, berries, cauliflower, apricots and flowers.

Rangeland Soils. In addition to Prime Soils for cultivation, the combination of climate and soils in the Fremont hills makes this area (and much of the rest of the Diablo Range) highly productive rangeland. The Generalized Soil Map of California refers to upland hills with clay loam soils, such as the hills of Fremont, as the "best natural grazing soils in the State," assuming normal management practices and under normal conditions (e.g., average rainfall).

The hills are a patchwork of soil classification types based largely on the degree of slope. Roughly 25 percent of hill soils above the Toe of the Hill are Class IV soils, 45 percent class VI, 25 percent are class VII and 5 percent Class VIII. There are no Class V soils in Fremont. The Class VIII soils are considered unbuildable and unarable. Somewhat more of the Hill face is in Class VI through VIII classifications than of the Eastern Hill Area. Large areas in the Fremont hills are commercially grazed, including land in public ownership which is grazed through leases with public agencies. Large parcel sizes (over 40 acres) permit efficient commercial grazing operations.

Soils and Urban Development

Just as various characteristics of soils determine their capacity to be used for standard cultivation practices, other characteristics affect their ability to be used for urban development. Some soil characteristics require the implementation of special engineering techniques to avoid failure of foundations, premature cracking and splitting of roads, severe slides and other types of problems. The soil characteristics discussed below do not include any underlying geologic conditions which affect the ability of buildings to withstand earthquakes. Seismic/geologic conditions are discussed in the Health and Safety Chapter.

An overall assessment of Fremont's soils' suitability for urban development would mirror their suitability for agriculture. The least constrained and most readily developed soils are generally Class I and II. As the slopes on which various soil types is found becomes more severe, the soils become more constrained for development. Steep slopes and shallow or highly erodible soils have high potential for slides and other dangers and are the most constrained and least suitable for development. In general, the steeper the slope the greater the need for significant engineering and modification of land forms to make the land suitable for safe urban development.

Soils are also rated for their ability to accept the impacts of on-site septic systems. Fremont's hill area soils, where septic systems are permitted, are not very well suited for septic systems. Many have low water holding capacity and rapid run-off, especially Class VI soils. The installation of individual septic systems requires detailed site and soil surveys to evaluate

the suitability of an area to support the system without unacceptable impacts on water quality or increasing the risk of slides.

Projections

Agricultural Productivity

Some of the remaining cultivated prime soils in Fremont are in public ownership and are likely to continue to be cultivated. Those in private ownership will face increased pressure for development, especially nursery parcels and other areas currently planned for urban development.

The hills also face increased pressure for subdivision and urban development, especially east of the visible ridge. Increased division of parcels into large residential "estates" with increasingly smaller parcel areas would affect the ability of the hills to support agricultural operations.

Soils and Urban Development

As the City continues to build out, the number of potential development sites dwindles. Much of the land remaining in the City for residential development is constrained in some fashion. Many areas previously considered too constrained or expensive to develop will be proposed for development over the next few years. An increasing proportion of all development proposals are likely to be on lands that face special constraints due to slopes, geologic concerns or soil limitations.

WATER RESOURCES

Water is a complex and multifaceted natural resource. High quality drinking water is a necessary prerequisite to urban development. Uncontrolled run-off water is a threat to urban development due to erosion and flooding. Water is an important aesthetic and recreational resource in the form of bays, lakes, creeks and ponds. Finally, water supports a variety of plant and animal habitats. Each of these qualities of water must be considered and balanced in planning for its conservation and management.

The issues related to water supply and demand for urban development are partially addressed in the Public Facilities Chapter. The impacts of urban development on water resources is addressed in this section including, for example, issues related to water quality and the impacts of urban water use on the ground and surface water supplies. The issue of flooding is addressed in the Health and Safety Chapter and flood control is described in the Public Facilities Chapter. Finally, additional data and background related to Water Resources can be found in the Water Resources Background Report.

Regulatory Environment

Because water has a variety of uses and impacts, and because of its importance to development, a complex web of laws and agencies has grown over time to control and manage water resources. Agencies with significant responsibility for some aspect of water planning are briefly described below:

- **The Regional Water Quality Control Board (RWQCB)** is the agency designated by the State of California to protect water quality of all water resources in the San Francisco Bay Area.

- **The United States Army Corps of Engineers (USACE)** is a Federal agency with permit authority over any filling of a waterway or wetlands.

- **The California Department of Fish and Game (CDFG)** is a State agency with permit authority for any modification of a waterway (such as a bridge). Its primary concern is fish and wildlife habitat.

- **The Alameda County Flood Control and Water Conservation District** is a County Agency responsible for flood control throughout Fremont. It owns and/or manages several water-ways, ponds, Lake Elizabeth and flood control ditches and culverts.

- **The Alameda County Water District (ACWD)** provides potable water service for the Tri-City area (Newark, Union City, Fremont). It is responsible for managing Alameda Creek water resources, the Niles Cone Aquifer and treatment of water for urban uses.

- **The San Francisco Water Department (SFWD)** controls most of the water resources of the Sunol Valley and is concerned with development of the watershed surrounding the Sunol Valley. It also provides ACWD much of the City's drinking water.

Other agencies with some interest in water or water quality are the East Bay Regional Park District, the US Fish and Wildlife Service, the United States Environmental Protection Agency, the Bay Conservation and Development Commission, the Union Sanitary District, and the Alameda County Mosquito Abatement District.

The City of Fremont has relatively little control over the water resources within its boundaries. It controls some elements of flood control and has responsibility for management of Lake Elizabeth. It also has a significant affect on waterways and water quality through its land use plans and influences the policies and programs adopted by the above agencies.

Surface Water

Surface water includes streams, drainage channels, ponds, lakes and other water on the surface of the land. Rainfall is the source of most surface water in Fremont. Rainfall occurs during a short season in relatively intense storms. The amount of water flowing on the surface depends on how much water soaks into the ground, which in turn is dependent on the characteristics of the soil and on the amount of land made impermeable by development (roads, roofs, parking lots, etc.). Most of the water not soaked into the ground flows through the City's creeks and drainage channels into the Bay. Some water is stored in lakes and ponds. There are no opportunities in the Fremont Planning Area to harness the hydraulic force of water.

Fremont's water resources are shown in Figure 9-5.

Streams

Before urban development began in Fremont, most streams and creeks would begin in the hills, flow onto the Bay Plain and eventually empty into the Bay or salt marshes surrounding the Bay. Except in the hills, the natural courses of water ways have been modified to control flooding and erosion. There are no rivers in Fremont.

Hill Creeks. Of the over 20 creeks draining Fremont's hills , none are naturally perennial and only a few of the larger creeks in Fremont have been named. These creeks provide much-needed water to plant life. Most are lined with thick vegetation which tends to stabilize soils and slow erosive effects of the water. Many have high scenic value. Although dry on the surface during summer, water tends to remain in the sub-surface providing moisture for plant and animal communities.

While the water quality in Fremont's hill creeks has not been tested, there is likely to be little contamination by urban pollutants outside of developed areas; some bacteria and other pollutants from animal wastes may be found.

FREMONT GENERAL PLAN

WATER RESOURCES

- Hill Creeks
- Flood Control Channels
- Niles Cone
- Flood Control Detention Facilities
- Aquifer Recharge
- Proposed Salinity Barrier
- Watershed Boundaries

CITY OF FREMONT BOUNDARY

SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

BASE MAP DATE MAY 1989

FIGURE 9-5

SOURCE: ACWD reports 1974 - 1989

Developed Bay Plain and Hills. Within the urbanized areas of Fremont, most creeks have been channelized or put into culverts to prevent flooding. Runoff from the northern areas of Fremont drains into Alameda Creek while runoff from the central part of Fremont drains into Newark and Mowry Sloughs. Most of the southern part of the City drains into Mud Slough and Coyote Creek (Figure 9-5).

The primary purpose of the flood control system is to control the flow of water and prevent flooding. Flood control facilities are generally not designed to maximize benefits from water resource values such as aesthetic enjoyment, habitat and recreation values. Some flood control system elements, such as the Alameda Flood Control Channel and Lake Elizabeth, have been designed with recreational and aesthetic purposes in mind. Likewise, some of the creeks in the developed portions of the hill area have been left in a semi-natural state. Some open flood control channels have limited vegetation and other natural qualities.

Water quality in the streams and flood control channels of the Bay Plain has not been tested. However, typical urban pollutants (heavy metals, petroleum products, pest control chemicals) are generally picked up in rainwater flowing off streets, roofs and landscaping and flow into the City's flood control and drainage system. These pollutants are eventually deposited in the Bay. Development can also lead to disturbances in the soil which result in increased erosion and sediment in surface waters.

Alameda Creek

Alameda Creek is by far the largest and most important creek in Fremont. Alameda Creek supplies a portion of Fremont's potable water supply and is the major creek in Southern Alameda County (see Figure 9-6). Fremont is located in the westernmost part of the Alameda Creek Basin which encompasses not only the Tri-Cities area but Sunol Valley and the southern inland valleys south of San Ramon (the Livermore and Amador Valleys). Alameda Creek's historic drainage area is over 695 square miles. Activities that affect water quality and quantity in other parts of the basin can have a significant impact on Fremont's water supply.

Much of the water that historically flowed through Alameda Creek is now diverted to reservoirs (see Figure 9-6). Some of the water flowing through Alameda Creek when it reaches Fremont is imported from other parts of the State and released into the Creek. For example, a substantial portion of the water flowing through the creek during dry months is released from State Water Project facilities. Water is also released from Calaveras Reservoir into an Alameda Creek tributary pursuant to agreements with SFWD. The source of the SFWD water is the Sunol Valley and other parts of SFWD's Hetch Hetchy water system.

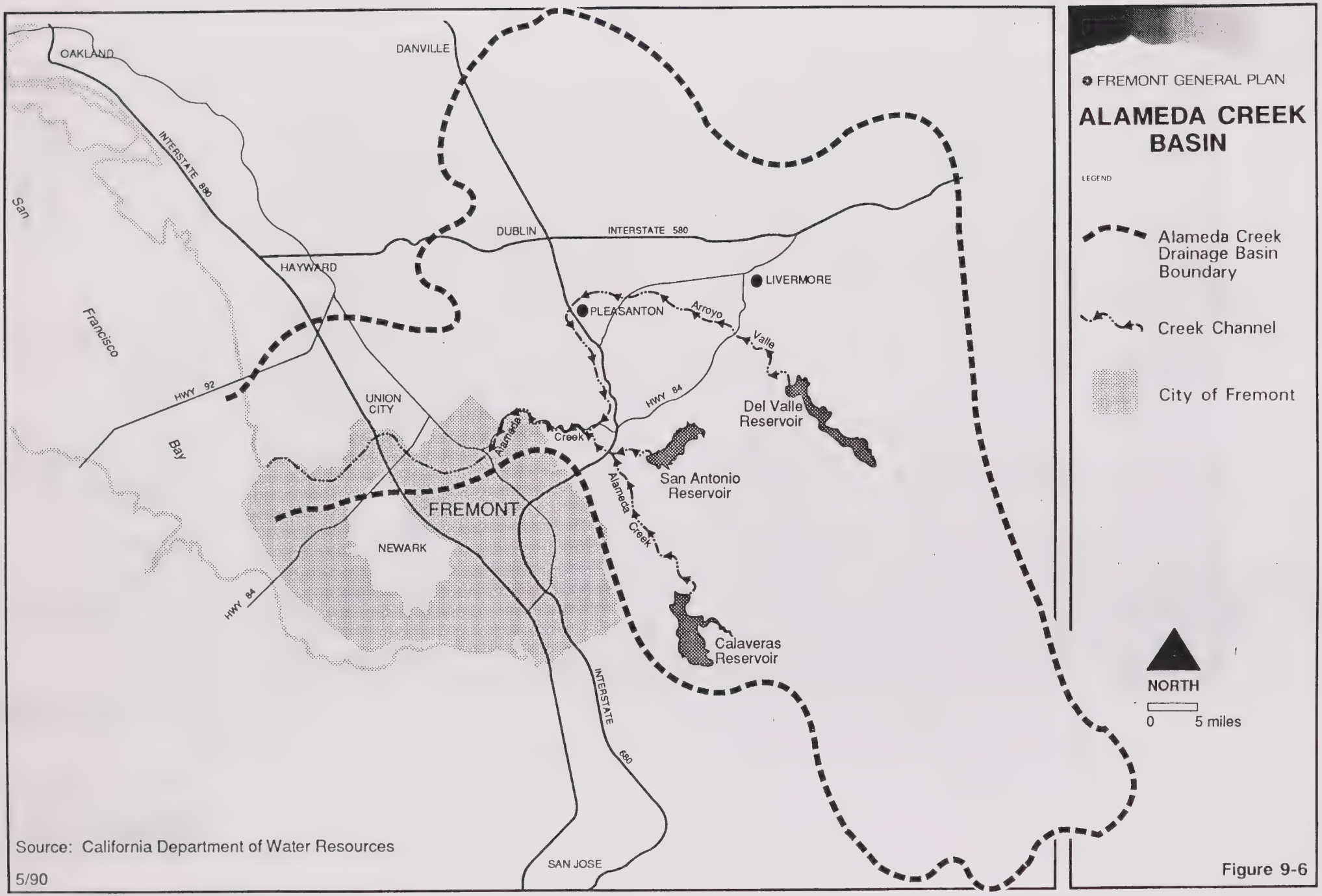

FREMONT GENERAL PLAN
ALAMEDA CREEK BASIN
LEGEND
Alameda Creek Drainage Basin Boundary
Creek Channel
City of Fremont
NORTH
0
5 miles
OAKLAND
DANVILLE
INTERSTATE 880
San
Francisco
Bay
DUBLIN
INTERSTATE 580
HAYWARD
LIVERMORE
PLEASANTON
Arroyo
Valle
HWY 92
UNION CITY
HWY 84
Del Valle Reservoir
Alameda
Creek
San Antonio Reservoir
FREMONT
NEWARK
Calaveras Reservoir
INTERSTATE 680
SAN JOSE
Source: California Department of Water Resources
5/90

Figure 9-6

Once in Fremont, much of the water in Alameda Creek is diverted into the Alameda Creek Quarry ponds where it recharges the Niles Cone Aquifers (see below, under "Groundwater" for further discussion of the aquifer). Water releases from the reservoirs and State Water Project facilities have allowed for regular year-round water-flow in Alameda Creek, whereas prior to 1962 there was no surface flow for dryer months in most years.

Alameda Creek Water Quality. Water quality in Alameda Creek varies significantly by time of year, depending on the amount of rainwater flowing through the creek in relation to water discharged from reservoirs. Before 1979, the levels of several pollutants in Alameda Creek exceeded RWQCB limits in a significant number of samples. This level of pollution resulted, in part, from the high level of wastewater discharge into the tributaries of the Creek from the Livermore/Amador Valleys. After 1980, when a wastewater export pipeline to the Bay was developed from the valleys, the level of several pollutants in Alameda Creek dropped significantly. However, other activities (such as quarry discharges) have left high levels of some minerals and other elements in the Alameda Creek water.

Salt Creeks

In the western portion of Fremont there are a number of large and small salt water or tidal creeks that flow through the marshlands. The larger salt water sloughs, including Newark Slough and Plummer Creek, appear to be former channels of Alameda Creek. The smaller salt water creeks have little flow except from tidal action and some runoff from the urban areas. Most of the drainage from the hills to the east of the central and southern part of Fremont drain into the larger salt water creeks such as Mowry Slough or Coyote Creek.

Ponds and Lakes

Fremont has no natural lakes. Lake Elizabeth is an artificial lake created as a recreation resource and as an element of the flood control system. Lake Elizabeth was created from "Stivers Lagoon", a natural wetlands area that formed over the unusual geologic conditions at the Hayward Fault (similar to the other ponds and wetlands areas near the BART Station). Water quality in the lake is affected by animal wastes (especially bird population). Some runoff, carrying pollutants from the urban area, also enters the lake.

Most large ponds in Fremont are also artificial. These ponds include those at the site of the Alameda Creek Quarrys which are managed to maximize their use for recharging the groundwater basin (as discussed below, under "Groundwater"). Water quality in some of these ponds is dependent on the water quality flowing into the ponds from Alameda Creek (see above discussion and other discussion under Groundwater).

Ponds near the Fremont BART Station were originally one ponded/wetlands area known as Tyson's Lagoon. The area has been significantly altered and is now managed for flood control purposes. The Lagoon was at one time part of the natural wetlands area extending from Stivers Lagoon along the Hayward fault. These ponds have significant amount of wildlife habitat (see

the Biology Section of this Chapter). Water quality has not been tested in these ponds, but due to the proximity of the wetlands and ponds to roads and parking lots, they are probably affected by standard run-off pollutants from urban areas.

Bay

Fremont's boundaries extend into the southern part of San Francisco Bay. Much of Fremont's run-off drains into the Bay carrying with it whatever pollutants, silt and other solids have been picked up in the City. The Bay is not only an important wildlife resource (as discussed in the Biology Section), but also a recreation resource and an industrial resource, since one of the Tri-City's major industries is salt production.

Water quality in the Bay has been tremendously altered by the diversion of freshwater and the year-round disposal of treated sewage water into the South Bay. Water quality is also affected by urban run-off which includes a variety of toxic chemicals and heavy metals.

There are no harbors in Fremont.

Groundwater

Groundwater is that portion of the earth's water supply located beneath the surface of the ground. Fremont overlies a large subsurface basin filled with layers of sand and gravel which store water. These water bearing layers are called aquifers. The basin, known as the Niles Cone, extends from the base of Mission Hills in Fremont on the east to the San Francisco Peninsula on the west. It contains several discrete aquifers at varying levels beneath the surface. The Hayward fault is a barrier between the eastern and western portions of the aquifers.

Water historically percolates through the ground into the aquifers through rainfall and through creek beds (especially Alameda Creek). The water then flows underground and eventually seeps into the Bay.

The groundwater stored in the Niles Cone has historically provided much of Fremont's potable water supply. The Aquifers are used like reservoirs. Wells sunk into the aquifers collect water which is then pumped out, treated and available for urban use.

Water Quality. The Niles Cone was historically a source of good quality water. However, water quality began to deteriorate during the early 1900s when demand for water began to exceed the amount being returned to the aquifer through natural percolation. The "overdraft" of water led to saltwater intrusion into the aquifer system.

In 1962, the Alameda County Water District embarked on a program to restore the aquifers by importing water from other parts of the State. The imported water is used to increase the amount of water being returned to the aquifer, a process known as "recharging." In a natural condition, recharge of the Niles Cone occurred primarily during the wetter parts of the year.

Imported water allows for year-round recharge of the aquifers and increases the supply of water available for service. Fresh water percolating from the natural and artificial recharge is pushing back the saline water towards the Bay in some aquifers. In other aquifers the saline water cannot be pushed out into the Bay. The strategy for these aquifers is to pump out contaminated water from a series of aquifer reclamation wells.

ACWD imports water through Alameda Creek and stores it in the former gravel pits at the Alameda Creek Quarries and also installs temporary dams on Alameda Creek to increase percolation through the stream bed. Because Alameda Creek and its tributaries flow through urbanized areas, water quality problems anywhere in the basin can have an impact on Fremont's water quality.

Water quality in the Niles Aquifer (outside of the areas affected by saltwater intrusion) generally reflects the quality of aqueduct water and any elements received from the ground. Water quality from the Niles Cone varies from area to area, but is typically hard and generally bicarbonate. In addition to natural salts, there is the potential for contamination by hazardous materials, especially those spilled on the ground or into Alameda Creek, or those leaking from underground tanks. There has been no identified contamination of the Niles Cone by spills or leaking tanks.

Projections

Surface Water

Streams

Hills. The future of Fremont's hill creeks and streams is closely tied to the amount of development occurring in Fremont's hills. Land adjacent to streams is an attractive location for development. Any development adjacent to creeks would have potential impacts on the creek water resulting from contaminants in run-off and siltation, as well as impacts on the habitat areas surrounding the creek due to construction and development.

In the hills east of the Hill Face, typical urban development patterns would significantly alter the hill landscape leading to potentially significant impacts on waterways. Water quality could be affected by run-off from streets and developed areas as well as possible contamination from individual septic systems. Increased impervious surfaces would also increase the amount of run-off with potentially significant down-stream impacts from increased erosion and siltation.

Bay Plain and Developed Hills. There are only a few remaining remnants of semi-natural creeks and waterways on the Bay Plain. A few creeks have been preserved in a semi-natural state in the developed portions of the hills. Almost all flood control channels, ponds, and stream beds are managed for only one of the impacts of water: its potential to flood. The habitat and aesthetic values of water are not always a high priority in the design and development of flood control facilities.

Fremont took a leadership role in the 1960s when it encouraged the Army Corps of Engineers to design the Alameda Creek flood control channel to permit some recreational use and landscaping. In the future, the City could work with the Alameda County Flood Control and Water Conservation District to establish a program of modifying existing flood control facilities, and designing future flood control facilities to improve the recreational, aesthetic and biological characteristics of those waterways within the City.

Alameda Creek

The amount of water flowing through the Creek is protected by agreements and contracts with various agencies controlling the water in the reservoirs. Periods of drought may affect water flow.

The most serious concern for Fremont in regard to Alameda Creek is the potential degradation in water quality as a result of urban development in its watershed. The Alameda Creek drainage area includes the Livermore-Amador Valley (see Figure 9-6). Even though most of the water flowing through Alameda Creek is discharged from reservoirs or directly from the South Bay Aqueduct, pollution enters the water as runoff from urban areas.

The pipeline carrying wastewater from the Livermore/Amador Valley directly to the Bay is almost at capacity. Continued growth in the inland valleys is leading once again to review of alternative sewage disposal methods. It is important for the City to work with ACWD to monitor decisions regarding sewage disposal for their impacts on Alameda Creek. In addition, pollution problems may increase as a result of direct discharges into the Alameda Creek system from sources such as industry, landscape watering and urban runoff. Fremont and the ACWD must monitor development proposals in the watershed to ensure appropriate mitigations are in place to capture and reduce the pollutant levels in urban runoff.

Alameda Creek may also be polluted by a traffic accident involving a vehicle carrying hazardous materials on adjacent roads, especially on bridges. This threat has been reduced on Niles Canyon Road by a State law prohibiting trucks carrying hazardous materials from using this route. There are several bridges in Fremont which cross Alameda Creek above the recharge pits. There is also the threat of urban pollutants draining into Alameda Creek from adjacent roads and development, or from spills of toxic materials at adjacent land uses.

Most of the southern portion of the Alameda Creek watershed east of Fremont has remained agricultural. The San Francisco Water Department has restricted uses in this area to maintain water quality in their reservoirs. The City should cooperate with SFWD to protect the water quality in this watershed.

Lakes and Ponds

Lake Elizabeth and its adjacent marshes and ponds are all largely man-made, although located in a natural wetlands area. Man-made facilities tend to require careful management to avoid siltation, growth of invasive plants and

algae, over-population by feral and non-native wildlife, and other problems. The Lake is also a flood control facility. As with other flood control facilities, the needs of flood control must be carefully weighed against the recreational, wildlife and open space landscape values of this lake water resource.

The ponds and wetlands near BART are also flood control facilities with significant wildlife values. Previous modifications of the ponds near BART have not fully accounted for the wildlife and landscape values of this water-resource. Future modifications of these wetlands are expected as a result of a southerly BART extension. Any new modifications could seek to retain and enhance the biological and aesthetic values of these resources.

The Alameda Creek Quarries Ponds also serve multiple purposes for groundwater recharge, wildlife habitat and open space, as well as future recreational value. Since these ponds are also man-made, they too face serious problems with regard to siltation and degradation. While the most essential value must be the recharge of the groundwater system, this need should not lead to management solutions that discount the other important resource values associated with these ponds. The City, working jointly with the East Bay Regional Park District and Alameda County Water District, could seek to maximize all of the potential water resource values to the City.

Groundwater

The Alameda County Water District has an extensive program in place to reverse or mitigate past over-drafting of the Niles Cone. Successive years of drought, such as that occurring in the 1987 - 1990 period, could lead to temporary setbacks in achieving improvement goals, but have not had a significant impact on the plan. In future years, as new development leads to less "cushion" in the water supply, temporary over-drafts may be more common in dry years. Constant monitoring and management of the Niles Cone will be required to ensure an adequate and high-quality supply of drinking water for the City.

Direct Pollution to the Aquifers. Perhaps the most serious threat to the aquifer water supply is the potential for chemical leaks into the aquifer. While such leaks have led to contamination of other aquifers in other parts of the State there has been no evidence of a problem in the drinking water of the Niles Cone. However, there is a limited amount of identified leaking and other discharges from underground tanks in Fremont. Leaking can be prevented, but monitoring and review of existing tanks, maintenance of leakage control procedures and careful review of proposed new tanks is required to ensure protection of the aquifer.

Bay

Fremont contributes relatively little to Bay water quality issues in the South Bay. As development continues in Fremont, it will be important to continue to address the problem of urban run-off and to seek to minimize urban pollutants entering the Bay. Of particular importance will be plans to

address possible spillage of toxic materials in the industrial area, and especially west of I-880. Such spills have the potential to enter directly into the Bay through various creeks and sloughs if necessary protective measures are not instituted.

The 1986 Water Quality Control Plan for the San Francisco Bay Basin, adopted by the Regional Water Quality Control Board in implementation of the Federal Clean Water Act, requires the development and implementation of a Study Plan to address the impacts of storm water runoff on the water quality of the Bay. The Regional Water Quality Control Board has required that Alameda County, cities in the County, and Alameda County Flood Control and Water Conservation District jointly apply for a National Pollutant Discharge Elimination (NPDES) permit.

Under a joint agreement, Alameda County and associated cities are monitoring water quality at 16 representative outfall locations, and estimates of the type and amount of sediments and pollutants are being made. The next step will be to develop control measures to mitigate or reduce nonpoint sources of pollutants. The County and cities are currently (January 1991) drafting a joint agreement to implement the Alameda County Urban Runoff Clean Water Program.

ENERGY RESOURCES

The City of Fremont produces very little energy within its boundaries. Energy is imported to Fremont in the form of electricity, natural gas and petroleum fuels from other parts of the State, nation and world. While little energy is produced in Fremont, energy is a limited natural resource. The production and use of energy causes significant environmental impacts, both in Fremont and elsewhere in the region and State. For these reasons, it is important for cities to encourage the conservation of energy resources. General Plans are required to consider opportunities for energy conservation in residential development. This issue and other strategies for conserving energy are addressed in this Chapter. Additional data and background information can be found in the Energy Background Report.

Setting

Energy is measured in terms of the work it is capable of doing. A common measure of energy is the British thermal unit or Btu. One Btu is the amount of energy required to raise the temperature of one pound of water one degree Fahrenheit.

Fremont is dependent on three major types of energy:

- **Petroleum fuels.** These are primarily gasoline and diesel fuel for vehicles, fuel oils for industry and electrical power generation, and a variety of other liquid fuels such as kerosene. Petroleum fuel is

measured in gallons and contains approximately 12,400 Btu per gallon.

- **Natural gas.** Natural gas is measured in cubic feet and contains approximately 1,050 Btu per cubic foot.

- **Electricity.** Electricity is measured in kilowatt hours (Kwh), and generates 3,413 Btu per Kwh.

Supply

Assuming the citizens of Fremont consume energy in the same fashion as other Californians, approximately 90 percent of the energy consumed here would come from non-renewable sources of natural gas and petroleum. California imports about 70 percent of its energy resources. The State produces about 43 percent of its own oil supply (24 percent of total energy consumed) and 11 percent of the natural gas consumed.

Electricity is produced by hydroelectric resources, fossil fueled plants, geothermal resources, wind plants and nuclear plants. Pacific Gas & Electric (PG&E) is the exclusive supplier of electricity and natural gas to the citizens of Fremont.

Consumption

PG&E gathers data for the Tri-City area (Fremont, Newark, Union City). Natural gas accounts for 61 percent of the energy provided the Tri-City area by PG&E. Of the natural gas used, about half is consumed by residential customers and half by business. Of the electricity consumed, business use accounts for approximately 70 percent, and residences use about thirty percent.

Tri-City residential customers are typical of energy consumers in the State. About 47 percent of the energy used in the home is gas, and the remainder is electricity. According to PG&E, its customers use 36 percent of their energy for heating their homes, and another 18 percent for heating water.

Assuming Fremont is typical of California, 50 percent of all energy consumed is consumed for transportation. Statewide, about 75 percent of all the State's oil supplies are consumed by transportation.

Impacts

As is discussed in the Air Quality section of this Chapter, fossil fuel consumption is the primary contributor to air pollution. The consumption of fossil fuels is also the main contributor to the "greenhouse" effect, a worldwide trend toward global warming caused by the build-up of carbon dioxide in the atmosphere. The production of electricity also has impacts on the environment, including the damming of natural rivers for hydro-electric energy and several serious potential environmental impacts related to the production of nuclear energy.

Projections

Energy use in Fremont will increase proportionate to the increase in homes and businesses in the City. In addition, energy consumption for transportation will increase based on several variables, including the following.

- Locations of jobs and homes. The closer people live to their jobs, the less energy is consumed in transportation.
- Location of homes and shopping, recreational activities, schools and other land uses.
- Availability of alternative transportation modes.

The City can influence energy consumption by maintaining and applying energy efficiency standards in buildings and by encouraging energy efficient site designs and landscaping. The City's land use plans can encourage a local balance of jobs and housing and ensure the availability of shopping, recreational, childcare and other facilities near homes and jobs, thereby reducing the use of the auto. Land use plans can also cluster higher intensity uses near transit. Finally, the City can encourage the development and use of alternative transportation modes.

AIR QUALITY

Air quality affects people's health and the quality of the environment they live in. Habitual exposure to air pollutants represents an especially high health risk to sensitive people, such as the elderly and people with respiratory problems. Dirty air also affects the visual quality of the Bay Area. It can have a significant economic impact as businesses choose to locate in areas with a cleaner environment.

The quality of air is generally dependent on both local and regional activities and controls. Air resources themselves are clearly regional since air cannot be confined to the boundaries of a jurisdiction. Moreover, meteorological conditions tend to concentrate air quality problems in certain parts of the region. While one portion of the region may not exceed air quality standards, it contributes to the air quality problems of other parts of the region. For this reason, air quality is monitored and some air pollution controls are instituted and administered by a State designated regional agency, the Bay Area Air Quality Management District (BAAQMD).

Air quality is also affected by local actions and can be materially affected by land use and transportation system decisions. In the Bay Area, where automobiles are the major generator of air pollution, local decisions regarding the intensity of land use, the location of major destinations, and the availability and convenience of alternatives to the auto can all be influenced by local government land use and transportation plans. Planning

for the achievement of regional air quality standards is the joint responsibility of the Association of Bay Area Governments (ABAG), the Metropolitan Transportation Commission (MTC) and BAAQMD.

This section in the Natural Resources Chapter addresses existing air conditions in Fremont and projections about the future. It then establishes Fremont's strategy for addressing air quality issues in the future. Additional information can be found in the Air Resources Background Report.

Setting

Air quality has been a persistent environmental problem in the Bay Area. In spite of major improvements in air quality over the past twenty years, the Bay Area still experiences high air pollution levels.

Major Air Pollutants, Sources and Health Effects

While there are many different kinds of potential air pollutants, only a few are generally monitored and controlled by State and Federal air standards. The following section describes major air pollutants.

Carbon Monoxide (CO). This is an odorless, colorless gas generally formed by the incomplete combustion of fuels. CO distribution is generally related to vehicular traffic and weather (wind, etc). High CO concentrations occur when many motor vehicles are idling or at low speeds. CO therefore tends to exceed standards near congested streets and intersections. CO can result in headaches and dizziness and may aggravate cardiovascular disease.

Ozone (O3). Ozone is the primary component of "smog." It is not emitted directly but is formed in a complex photochemical reaction in the atmosphere. It involves several reactive organic compounds (ROG) and nitrogen oxides (NOx) Typically, high ozone concentrations occur during warm, windless, sunny days in summer and autumn. Sources of NOx and ROG are fuel combustion in motor vehicles and the evaporation of solvents, paints and fuels. O3 can exacerbate respiratory problems, and diminish resistance to disease. It also irritates eyes, reduces visibility and damages vegetation.

Nitrogen Dioxide. These have an important role in the formation of ozone and are the byproduct of various combustion processes in homes, motor vehicles and industry.

Particulate matter. Particulates include both solid and liquid particles suspended in the air, such as smoke, dust, aerosols and metallic oxides. The current focus of regulation is on smaller particulates (PM10). Typically, high particulate concentrations are found on winter days coupled with stable meteorological conditions and the burning of fuels (especially wood).

Sulfur dioxide (SO2) is also monitored, but is not generally a concern in the Bay Area where there is little use of high sulfur fuels. There are hundreds of other substances potentially released into the air which can be highly injurious, even in small quantities. These include certain solvents (chlorinated hydrocarbons), metals (especially lead in gas) and asbestos. Some of the most widely found chemicals include the following:

- benzene (gas stations)
- perchloroethylene (dry cleaners)
- ethylene oxide (hospitals)

Existing Regulations and Bay Area Conditions

Air pollution regulations have been adopted by both the Federal and State Government, with the State's regulations traditionally being the more rigorous of the two. The Environmental Protection Agency (EPA) administers Federal standards, while the California Air Resources Board (CARB) administers State standards.

CARB has delegated much of its authority in the Bay Area to the Bay Area Air Quality Management District (BAAQMD). BAAQMD must provide permits for any stationary source of potential air pollution. There are 178 permits currently issued for Fremont. BAAQMD also maintain air quality monitors throughout the Bay Area, with one monitoring station located in Fremont. Table 9-1 shows current State standards and Fremont's air quality conditions in relation to those standards.

Fremont currently meets current State standards for all identified pollutants, with the exception of ozone. The particulate standards have recently been modified and there is no current information on the Bay Area's or Fremont's conformance with the new standard. Table 9-1 shows the old Federal particulate standards. Although not on the chart, other Bay Area stations have been found to exceed the State's CO standard. The Bay Area then, as a whole, is considered a non-attainment" area for air quality due to exceedences of carbon monoxide and ozone standards.

The main source of the Bay Area's problem is motor vehicles. About 80 percent of CO and roughly half of the precursors of smog comes from motor vehicles. The most serious Bay Area ozone problems occur in the Santa Clara, Livermore and Diablo Valleys where prevailing winds and meteorological conditions tend to concentrate not only local pollutants but regional pollution. This is also true for particulates. CO, on the other hand, is typically a sub-regional problem with the most serious problems areas being northern Santa Clara County, parts of western Alameda County and southwestern Solano County.

Current State law requires non-attainment areas to prepare plans for eventual attainment of State standards, with deadlines for compliance varying between 1994 and beyond, depending on the current degree of severity.

TABLE 9-1

Air Pollutant Data Summary

STATION: Fremont (FRMT)

Pollutant	1984	1985	1986	1987	1988
OZONE:(ppm)					
Highest 1-hour	0.15	0.15	0.14	0.16	0.13
Days > 0.09	19	8	3	17	7
CARBON MONOXIDE:(ppm)					
Highest 1-hour	9.0	10.0	10.0	10.0	9.0
Days > 20.0 ppm	0	0	0	0	0
Highest 8-hour	5.1	6.1	5.6	5.0	5.3
Days $\geq$ 9.1 ppm	0	0	0	0	0
NITROGEN DIOXIDE:					
Highest 1-hour	0.13	0.14	0.14	0.15	0.14
Days > 0.25 ppm	0	0	0	0	0
PARTICULATES:					
Highest 24-hour TSP	109	129	106	93	107
Days > 150 ug/m^3	0	0	0	0	0
Annual Geometric Mean	49.5	53.2	47.5	44.9	44.6
Annual Mean > 60 ug/m^3	No	No	No	No	No

Units - ppm: parts per million; ug/m^3: microgram per cubic meter

Source: California Air Resources Board, Air Quality Data Summary, 1984-1988.

The measurements taken at Fremont's air quality measurement station are representative of the City as a whole but do not reflect potential exceedences at specific locations adjacent to pollution sources. For example, carbon monoxide can be a localized concern at congested intersections. Possible exceedences can only be measured on a case by case basis and require air sampling and other techniques.

A monitoring station for nine other toxic air pollutants has been operating since 1986. While information is available (see Air Quality Background Report) on current conditions, there are no Federal or State standards against which to measure existing conditions to determine if they are possible health risks.

Current Regulatory Programs

In addition to requiring permits for stationary sources, any new source of air pollutants must use best available technology to reduce pollutants. The State has also adopted a requirement for vehicle inspection to reduce tail-pipe emissions.

Air Quality and Sensitive Receptors

Certain types of land uses are particularly susceptible to air quality conditions. Among these are schools, hospitals, nursing homes, and other facilities that care for the frail or elderly. In general, receptors sensitive to air quality are also sensitive to noise. The location of sensitive receptors is shown in Figure 9-7.

Projections

Auto Emissions

Future improvements from the existing vehicle inspection program are still expected (for example, as older cars exempt from the standards are replaced). Other improvements are expected as newer cars with better pollution controls replace older cars in general. These improvements are expected to be marginal, barring some significant improvement in technology or fuels.

Perhaps the greatest improvement could be achieved through changes in travel behavior, with people living closer to work or using alternatives to the single occupant auto. The availability of sufficient housing affordable to an expected work force, and of alternative modes of transportation, will significantly affect the degree to which air pollution from autos can be reduced in the future.

Despite possible improvements, increases in the number of cars on the road, and in congestion resulting from those cars, may lead to continued exceedences of air quality standards. This is especially true in regards to

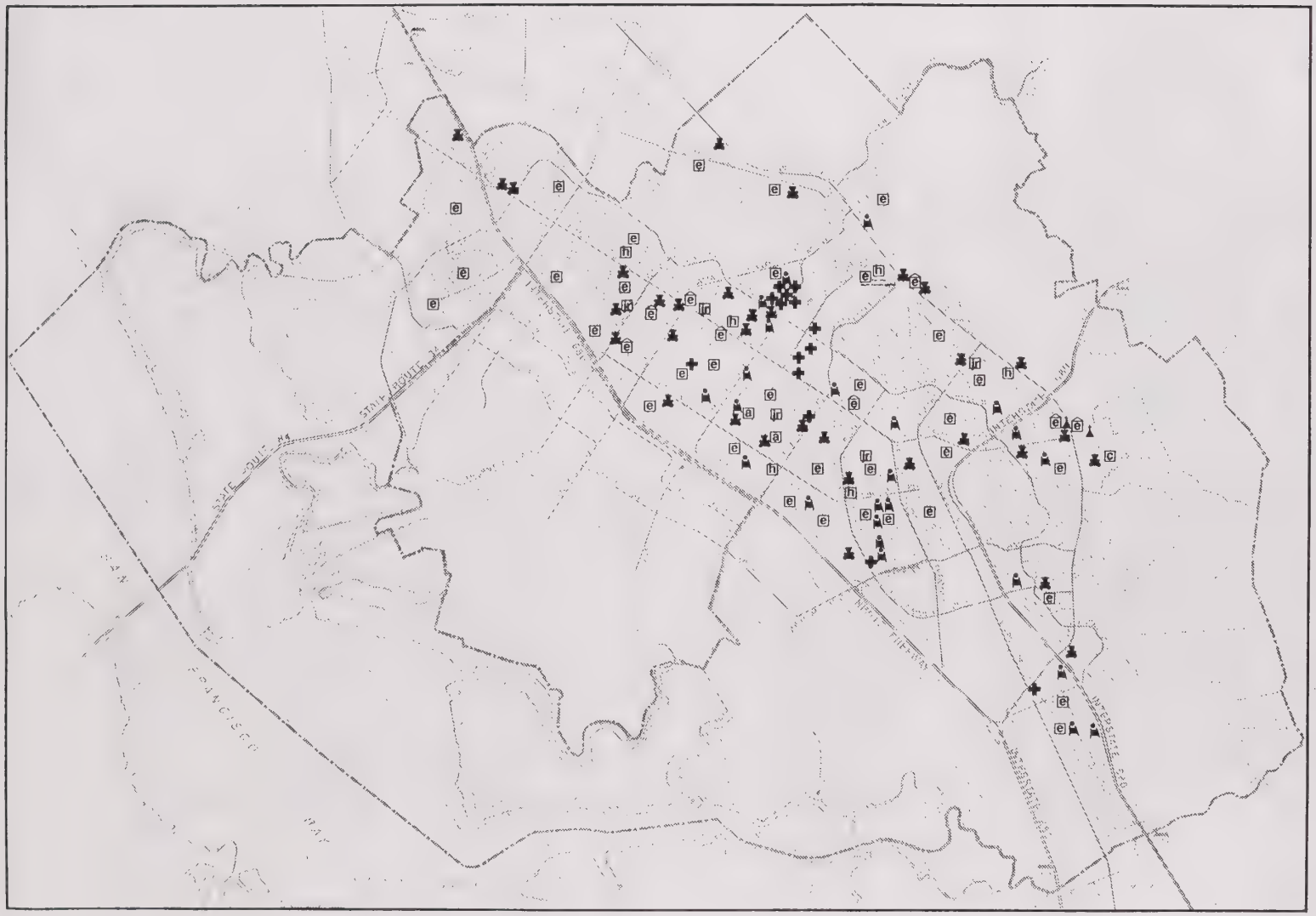
carbon monoxide at highly congested intersections, sometimes referred to as "hot spots". The air quality projections show that many major congested intersections in Fremont will be "hot spots".

Stationary Sources

As with the auto, a slow reduction in per-industry emissions is expected with technological enhancement of pollution control devices. However, improvements in technology may be off-set by increases in the total number of industries which contribute to air pollution.

Because the Bay Area still occasionally violates State and Federal air quality standards, the BAAQMD will have to propose and implement additional ozone control strategies and estimate a new attainment date. Federal law had required compliance with Federal standards by 1987. Despite lack of compliance by many areas across the nation, EPA has not attempted to apply any sanctions. Federal sanctions could include a funding moratorium on highway construction funds.

ABAG, MTC and BAAQMD are considering various programs to bring the region into compliance with State and Federal Standards.



FREMONT GENERAL PLAN

NATURAL RESOURCES SECTION

SENSITIVE RECEPTORS

LEGEND

- HOSPITALS AND CLINICS
- SCHOOLS
  - e Elementary
  - e Private Elementary
  - Jr Junior High
  - h High School
  - c College
  - a Adult Education
- CONVALESCENT, NURSING AND RETIREMENT HOMES
- CHILD CARE CENTERS AND PRE-SCHOOLS
  (Child Care Centers on elementary school sites not shown.)
- CONVENTS

CITY OF FREMONT BOUNDARY

SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

0 2000 4000

NORTH

BASE MAP DATE: MAY, 1989
Source Information Date: April, 1990

FIGURE 9-7

VISUAL RESOURCES

Fremont's visual resources are important natural resources critical to Fremont's identity as a community. Fremont's views of the Bay and the hills make it an attractive location for businesses and homes. Views of natural landmarks help to orient people in the community and provide a sense of historical continuity. Such resources require recognition and conservation just as do the other natural resources that increase Fremont's quality of life and character.

While visual resources can be both natural and man-made, this section focuses on important natural resources and the visible impacts of manmade structures and roads on them. Visual resources that are not natural resources, such as built landmarks, historic buildings and the like, are addressed in the Land Use Chapter and in the Open Space Chapter.

Setting

Fremont residents have regularly indicated their concern with the visual character of Fremont. The 1969 General Plan places significant emphasis on community appearance. The 1981 Hill Area initiative was proposed, in part, to protect the visual character of Fremont's hills.

Physical Setting: The Open Space Frame

Fremont's dominant visual characteristic is it's physical setting, defined by its open space frame: water and Baylands on the west, coastal foothills and Mission Peak on the east, and Alameda Creek and associated open space areas on the north. The frame is not continued on its southern border. The frame allows for panoramic views of open space from the City, and views of the City from the frame. The frame also provide natural gateways to the community.

Hill Face. The steep, exposed, mostly undeveloped slopes of the Hill Face are visible from most parts of the City. A Hill Initiative, passed in 1981, provides special protection for the most visible portions of the visible Hill Face, defining a 1 mile viewing range to the Hill Face by which to assess the impacts of development. The relatively pristine nature of the Hill Face as a whole means that even small changes provide a significant visual contrast to the remaining area. The few existing visible buildings clearly stand out on the Hill Face and affect its visual character.

Wetlands and Bay. The wetlands and Bay provide two types of vistas. First, there are the views entering the City from the Dumbarton bridge (or from trails in the Wildlife Refuge) where the undeveloped character of the Bay's edge allows for expansive vistas of Fremont, Coyote Hills and the more distant Hill Face rising from the Bay Plain. The second vista is from the Hill

Area to the Bay where the Bay and wetlands are an important visual element and provide an edge to the developed portions of the City.

Alameda Creek. The Alameda Creek flood control channel roughly marks the northern edge of the City. It is typically viewed from seven road and highway crossings, and from passenger rail routes, such as BART and Amtrak. Users of the parallel regional trail have channel/creek views with hill background views from throughout the trail length. The Ardenwood Historic Farm and the Alameda Creek Quarries area add to the sense of visual openness on Fremont's northern border.

Fremont's Unique Visual Features

In addition to Fremont's natural setting, there are unique visual resources, most within the frame itself, but others scattered within the developed areas of the City, as shown in Figure 9-8. Some of these unique natural elements have resulted from past human actions, while others are part of the original physical character of the City.

Fremont's unique visual characteristics include Mission Peak, Lake Elizabeth and Central Park, Niles Canyon, Mission Hills and Coyote Hills. Mission Peak is the dominant landform in the hills and a symbol of the City. In Central Park, the views of lake with Mission Peak in the background are some of the most valued in the City. The rural and enclosed visual character of Niles Canyon is an important visual counterpoint to the developed Bay plain. Coyote Hills, an island of hills in a low lying plain with water on two sides, is one of the outstanding natural physical characteristics of Fremont.

Landmark trees are another important aspect of Fremont's visual character. These trees are often the remnants of large historical agricultural estates such as the Patterson Ranch (now Ardenwood Historic Farm) the California Nursery (now an historic park), Hidden Valley Ranch/Stanford House, Palmdale Estate (Sisters of the Holy Family) and the Huddleson Estate (Ohlone College). In addition to these areas, the City has identified other stands of mature trees along some of the older roads in Fremont, including Mission, Washington and Fremont Boulevards.


FREMONT GENERAL PLAN
UNIQUE VISUAL RESOURCES
Dominant Ridgelines
Elevated Viewpoints
Hill Roads
Natural Gateways
Visible Hill Face
Open Space Views
Waterfront Views
Landmark Estates
Combined Water and Hill Views
CITY OF FREMONT BOUNDARY
SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY
BASE MAP DATE
NORTH
WHIPPLE RD
UNION CITY
ALVARADO NILES RD
MISSION BLVD
NILES BLVD
HAYWARD
INTERSTATE 880
STATE ROUTE 84
NEWARK BLVD
CITY OF NEWARK
THORNTON AVE
CENTRAL AVE
CHURBY ST
CEDAR BLVD
MOWRY AVE
BLACOW RD
FREMONT BLVD
STEVENSON BLVD
GRIMMER BLVD
DURHAM RD
NIMITZ FREEWAY
INTERSTATE 680
WARM SPRINGS BLVD
SAN FRANCISCO BAY
MENLO PARK
PALO ALTO
MOUNTAIN VIEW
SUNNYVALE
SAN JOSE
ALVISO
MILPITAS

FIGURE 9-8

Fremont's Natural Gateways

The City has four natural, dramatic gateway entrances to the City: Mission Pass, Niles Canyon, the Dumbarton Bridge/Coyote Hills and Alameda Creek Quarry pond area. For residents, these natural gateways mark the boundaries of "home." For travelers, the gateways increase the sense of Fremont as a distinct community. Each of these gateways is marked by the change from rural to urban. The Niles Canyon and Mission Pass gateways are also marked by their sense of enclosure followed by an opening into an urban environment. The Mission Pass entrance has vistas of the whole south Bay area. The Dumbarton Bridge entrance to Fremont is one of the most beautiful gateways to any city in the Bay Area. The road travels through the open Bay and salt flats leading to a natural gateway in the Coyote Hills. The changing colors of the Coyote Hills and salt flats, and vistas of the Fremont hills combine to make this a unique experience. For BART riders, the Alameda Creek Quarry ponds mark the entrance to Fremont.

Fremont's Scenic Roads

Because it is not possible to conserve every view from every road, State, County and local governments designate specific routes where scenic character is considered particularly important. These roads are designated "Scenic Routes" (see Figure 9-9). Scenic routes may be thought of as the network of places from which the City is best seen. The following routes in Fremont have been designated scenic:

State Scenic Routes: I-680 and Niles Canyon

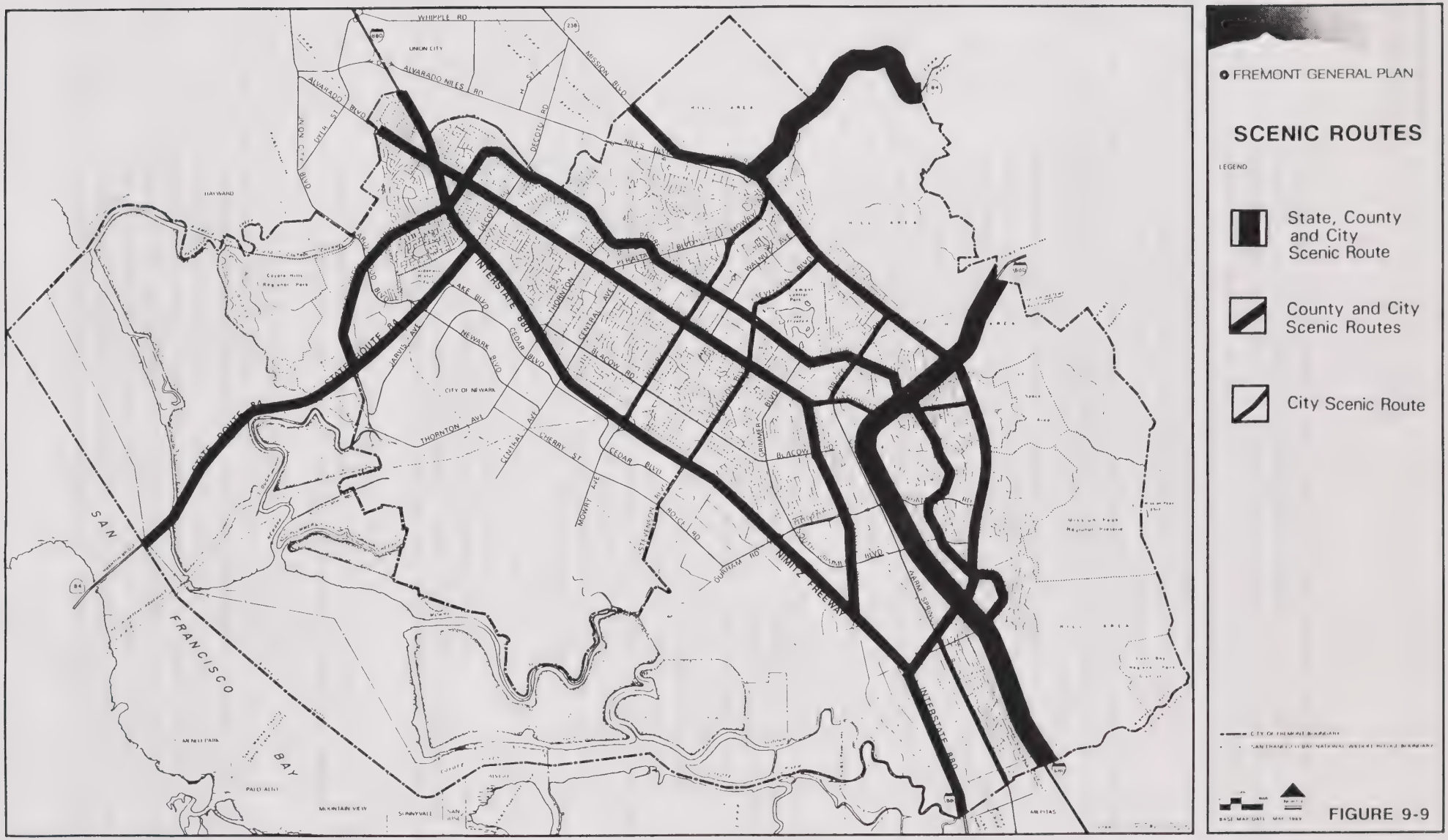
County Scenic Routes: I-880, State Route 84, Mission Boulevard and Paseo Padre Parkway (and the State routes).

City Scenic Routes: All of the above as well as the BART alignment, Fremont Boulevard, Mowry Avenue, Stevenson Boulevard, Warm Springs Boulevard and Washington Boulevard. Routes in the Hill Area are Morrison Canyon Road, Vargas Road and Mill Creek Road.

A State scenic route designation means that the view from the road should be considered in the design of the highway and in the way land uses are developed near the highway. Because local governments control land development, it is generally local government land use regulations that protect the scenic character of a State designated highway.

The County's designation is somewhat dated and generally applied to routes under the County's jurisdiction.

The City's scenic route designation was adopted in 1975 as part of the then required "Scenic Highways Element" of the General Plan. The Scenic Highways Element is no longer a required part of the General Plan, but consideration of the scenic qualities of key roads is still important and is carried forward in this section of the General Plan.



Scenic Route Element, Alameda County General Plan, 1966

The City's designated scenic routes have generally received greater attention in design and landscaping than other roads in the City. Each of the scenic roads outside the hilly areas has a theme tree (or trees). Several have landscaped medians and relatively lush landscaping along the edges of the road. All of the City's scenic roads (outside the hilly area) provide some unimpeded visual access corridors to the hills. View corridors are defined as views constrained by some type of barrier permitting a "corridor" of vision to a visual resource. Several scenic roads are also the location of City identified Landmark Trees.

The scenic routes in the hills provide close-up visual access to wooded canyons and creeks. However, the narrowness of hill roads constrains the use of these roads for scenic purposes.

Soundwall development is having an impact on the character of some of the city's scenic roads, with walls blocking vistas and creating a tunnel with monotonous tall walls on either side of the road.

Walkway Views

Similar to roads, it is not possible or desirable to protect the views from every sidewalk and trail in the City. However, the views from some walkways are important to a particular area or, in a few instances, to the character of the City as a whole. For example, the view from the trail around Lake Elizabeth to the hills and to other elements of the park is one of the most beautiful in the City and is one of the defining characteristics of Fremont. Similarly, the view to the hills afforded from Niles Boulevard in Niles or from Mission Boulevard in Mission San Jose, in part defines the character of those commercial areas. Views from the Coyote Hills or Mission Peak trails are other examples of some of the important trail views that define the character of Fremont as it is experienced by thousands of people.

Projections

View protection is likely to become more important as the City becomes more densely developed. To properly assess impacts and allow for reasoned discussion of view issues, decision making at the administrative, review board and legislative levels will increasingly need to rely on visual simulations that are accurate, unbiased, comprehensive and that assist decision makers with a general understanding of the visual impacts of a particular project. A consistent basis for informed judgements is needed so that appropriate actions can be taken to conserve visual resources and views.

Physical Setting: the Open Space Frame

Several elements of Fremont's open space frame are publicly owned and should therefore be protected from significant change. Expansion of regional parks and the Bay Wildlife Refuge should increase the amount of land protected from development, and especially the wetlands/baylands area.

Expected park improvements at the Alameda Creek Quarries should also enhance elements of the northern frame.

Portions of the Hill Face are also in public ownership, and additional areas are expected to be protected in the future. The privately owned portions of the Hill Face are protected by the Hill Area initiative from major development. However, the initiative permits limited development on the Hill Face. Each visible home on the Hill Face will have an impact on the visual character due to the prominence of the Hill Face and its relatively pristine nature.

Unique Visual Features

Almost all of Fremont's unique visual features are in public ownership, including Mission Peak, Lake Elizabeth and Central Park, the Alameda Creek and Quarries, Ardenwood Regional Preserve, and almost all of the Coyote Hills. A proposed golf course at the base of Mission Peak on City of Fremont land will need to be sensitive to the character of the area. Similarly, attention should be given to mitigating the visual impacts of buildings in or adjacent to Central Park. Any BART extension must be underground in order to limit its impacts on the character of the park. The quarry in the Coyote Hills will be phased out of operation in the next five years and a proposed rehabilitation plan should improve the visual character of this important entrance to the City.

Landmark Trees will be increasingly threatened by age and by development where sites are not publicly owned. For example, two of the estates in the Mission area (Hidden Valley Ranch/Stanford House and Palmdale Estate) are not publicly owned. Also potentially threatened are landmark trees along major roads where widening has been proposed.

Several of the City's natural gateways are partially in public ownership and therefore protected from development projects which could affect their character. Future private development adjacent to natural gateways can be designed and developed to minimize impacts and enhance the character of these important gateways.

Scenic Highways

Future development along the City's designated scenic roads should consider the visual impacts of the development on the view from the road. Visual corridors should be maintained periodically along the road to visual landmarks, especially within the Central Business District and in areas where soundwalls are developed. By maintaining special landscape features, and encouraging special designs and variable setbacks for soundwalls, the view from the road can be maintained and enhanced.

View From the Walkway

Several new major trails are proposed for Fremont (see Parks and Open Space Chapter), including several regional trails. The view from these trails will become an important element of the character of Fremont as it is experience by thousands of local and regional hikers and bicyclists through the City. As development is proposed for the commercial areas of the City, preserving corridors and views from commercial areas to the hills will become increasingly important to preserving the feeling of openness that is one of the City's hallmarks.

Goals, Objectives, Policies and Implementation

Natural Resources Goals

The following section describes how the City of Fremont will conserve its resources.

GOAL NR 1: Biological resources protected and enhanced

GOAL NR 2: Protection and conservation of natural resources in the planning, design and management of the City's landscape

GOAL NR 3: Environmental education programs to encourage respect for natural areas and habitats

GOAL NR 4: Conserve mineral resources

GOAL NR 5: Conservation of productive soil resources for agricultural uses

GOAL NR 6: Urban development consistent with soil conditions to safeguard health and property

GOAL NR 7: Development sensitive to surface water resources

GOAL NR 8: High quality water

GOAL NR 9: A mix and balance of land uses which conserves energy and reduces the need for commuting and auto use

GOAL NR 10: Building and site design standards which conserve energy

GOAL NR 11: Alternatives to the single occupant auto (this goal is addressed in the Transportation Chapter)

GOAL NR 12: Air quality meeting State standards

GOAL NR 13: An open space frame to the City

GOAL NR 14: A distinctive, positive visual image for Fremont

GOAL NR 15: Visual access to scenic resources

NATURAL RESOURCES (NR) GOAL 1: Biological resources protected and enhanced

OBJECTIVE NR 1.1: **Protection of wetlands, including watercourses and riparian areas for their critical biological values including their uses as habitat for rare or endangered animals and to maintain connections between habitat units**

Policy NR 1.1.1: Whenever feasible, natural and semi-natural wetland areas, including riparian corridors, vernal pools and their wildlife habitat shall be preserved or impacts minimized.

Implementation 1: Development encroaching on wetland areas, including lakes, ponds, marshes, and vernal pools shall be discouraged. Any development plans for areas that may affect the riparian corridor shall provide for maximum retention of natural plant formations and natural topographic features such as drainage swales and streams.

Implementation 2: Riparian Corridors are roughly identified in Figure 9-3. Concurrent with the development application the extent and characteristics of riparian corridors shall be carefully assessed to a minimum distance of 100 feet from the center of the creek bed. Environmental assessments of these areas shall consider the full spectrum of habitat needs for flora and fauna for their life cycle. Any development plans for areas that may affect the riparian corridor shall provide for maximum retention of natural plant formations and natural topographic features such as drainage swales and streams.

Implementation 3: Where watercourses must be modified for flood control or other purposes, the modified watercourse shall be revegetated to maximize wildlife habitat values, consistent with maintenance and safety requirements.

OBJECTIVE NR 1.2: **Increased interagency co-operation for the enhancement of biological resources within the city boundaries**

Policy NR 1.2.1: Through inter-agency cooperation and planning, maximize the biological values of publicly owned lands, consistent with other public purposes (recreation, flood control, groundwater recharge, etc.).

Implementation 1: Work with other public agencies such as the Alameda County Flood Control District and Alameda County Water District to prepare management plans for publicly owned unique natural areas, as identified in Figure 9-3. The plans shall consider the special needs of specific plant and animal species typically found in these publicly owned lands or waterways.

Implementation 2: Encourage the Alameda County Flood Control and Water Conservation District and the County Water District to preserve, enhance, and restore the wetlands in creek and flood control channels and water recharge areas that are under their jurisdiction.

NATURAL RESOURCES (NR) GOAL 2:
Protection and conservation of natural resources in the planning, design and management of the City's landscape

OBJECTIVE NR 2.1: Healthy tree resources within the City

Policy NR 2.1.1: Actively monitor and protect the health of the City's tree resources.

Implementation 1: Continue to monitor City street trees for disease and impaired growth and replace as required.

Implementation 2: Enforce City Tree Protection ordinance and make information regarding the ordinance easily available.

Implementation 3: Continue to carefully review tree removal permit requests for conformance with City removal criteria (i.e. fire or safety risk, state of disease).

OBJECTIVE NR 2.2: Conservation of the City's publicly owned biological resource base, including rare or endangered species of plant or animal and habitats such as wetlands, unique biological features, trees resources, naturalized areas and grassed areas

Policy NR 2.2.1: Recognize and conserve biological values in the management and development of publicly owned natural areas.

Implementation 1: Prepare a wildlife and plant conservation plan for the City, including creeks, flood control channels, tule ponds, open space lands not managed by the East Bay Regional Park District, and other publicly owned natural areas in cooperation with other public agencies where appropriate.

Policy NR 2.2.2: Minimize impacts of development in uplands adjacent to or associated with seasonal and other wetlands (see Figure 9-2 for approximate location).

Implementation 1: As part of the environmental assessment process, identify uplands areas adjacent to wetlands species habitat and propose mitigations for potential significant environmental impacts on the wetlands from development.

Implementation 2: Projects proposed in uplands areas should minimize runoff of excess nutrients, sediments and pesticides into seasonal and other wetlands. To the degree feasible, require conservation or revegetation of uplands vegetation for nesting, foraging and retreat.

Policy NR 2.2.3: Conserve woodlands and shrubbed areas in the Hill Area, especially ridgecrests, canyons and vegetated north facing slopes.

Implementation 1: Woodlands, vegetated ridgecrests, shrubbed areas, and associated creek and canyon bottoms shall be priority areas for preservation when development is proposed.

Policy NR 2.2.4: Avoid disruption of grassed and naturalized areas known to provide groundnesting for endangered, threatened or candidate animals.

Implementation 1: Establish policies regulating weed abatement and the draining and disking of wetlands and other wildlife habitats.

NATURAL RESOURCES (NR) GOAL 3: Environmental education programs to encourage respect for natural areas and habitats

OBJECTIVE NR 3.1: Public education regarding environmental resources within the City of Fremont

Policy NR 3.1.1: Continue to promote education in biology and natural resources to aid in the understanding of the natural environment.

Implementation 1: Maintain natural science centers in City and Regional Parks, where appropriate.

Implementation 2: Work closely with other agencies such as the East Bay Regional Park District, the US Fish and Wildlife Service, the California Department of Fish and Game, and the Fremont Unified School District in developing mutually beneficial public education programs.

Implementation 3: Whenever feasible, establish agreements with other agencies for the use of lands owned by other public agencies for natural education purposes.

NATURAL RESOURCES (NR) GOAL 4: Conserve mineral resources

OBJECTIVE NR 4.1: **Protect identified mineral resources from incompatible development whenever feasible and consistent with the City's long range development plans**

Policy NR 4.1.1: Consider mineral resource values prior to approval of land uses in the vicinity of the mineral resource area that could affect the future availability of the resource.

Implementation 1: Identify mineral resource areas outside of developed portions of the City as Mineral Resource overlays on land use diagrams and within the City's land use data base.

Implementation 2: Advise Planning Commission and City Council of mineral resource deposits for any development project proposed within approximately 100 yards of the identified resource. Evaluate impact of project on the resource during any project review or environmental assessment process.

Policy NR 4.1.2: Retain the existing open space land use designations whenever feasible on land containing identified regionally significant mineral deposits.

Implementation 1: Evaluate and consider the impacts of any proposed change in land use designation for a parcel of land containing regionally significant mineral resource identified on the Land Use diagram.

OBJECTIVE NR 4.2: **Mineral resource extraction activities consistent with the character and long term health of the City**

Policy NR 4.2.1: Mineral resource extraction will be permitted when it can be shown to be consistent with existing hillside and water quality protection policies of the City of Fremont.

Implementation 1: Evaluate proposals for mineral extraction to ensure consistency with existing Hill Area or water quality protection policies within this General Plan.

Implementation 2: All quarry proposals will be subject to full environmental impact assessment to evaluate impacts on adjacent uses, air quality, wildlife habitat, water supply, seasonal wetlands, scenic routes, streets, recreational open space and other relevant measures of impact.

Implementation 3: Proposals for quarrying will be evaluated in the context of the importance of the designated mineral resources to the market region as a whole and not just their importance to the City's area of jurisdiction.

Policy NR 4.2.2: Enforce requirements for rehabilitation of mineral resource extraction areas, including salt ponds and quarries.

Implementation 1: Review and enforce rehabilitation plans.

Implementation 2: Establish rehabilitation plans for salt ponds when salt production ceases.

Policy NR 4.2.3: Encourage preservation of former extraction areas (quarries and salt ponds) for wildlife and recreation purposes when feasible and appropriate.

Implementation 1: Consider conversion to wildlife habitat as part of rehabilitation plan for quarries and salt production areas.

Implementation 2: Encourage land owners of areas formerly used for mineral resource extraction to donate or lease land no longer needed for mineral extraction to an appropriate public agency for wildlife management and public recreation.

NATURAL RESOURCES (NR) GOAL 5: Conservation of productive soil resources for agricultural uses

OBJECTIVE NR 5.1: Continued agricultural or rangeland use in areas not proposed for urban development

Policy NR 5.1.1: Promote continued productive agricultural production in areas not proposed for urban development.

Implementation 1: Establish and maintain appropriate minimum parcel sizes for areas capable of supporting agriculture.

NATURAL RESOURCES (NR) GOAL 6:
Urban development consistent with soil conditions to safeguard health and property

OBJECTIVE NR 6.1: **Development projects designed to respond to soil conditions**

Policy NR 6.1.1: No development shall be permitted on Class VIII soils as defined by the United States Soil Conservation Service.

Policy NR 6.1.2: Prior to building construction, sufficient analysis of soils shall be conducted by a qualified engineer or geologist to ensure appropriate foundation and building design.

OBJECTIVE NR 6.2: **Hill Area development consistent with the special soils constraints of the Hill Area (see Land Use Chapter for definition of Hill Area, policies and implementation measures.)**

OBJECTIVE NR 6.3: **Minimum feasible erosion from urban development**

Policy NR 6.3.1: All engineered slopes, other than those constructed in rock, shall be planted or otherwise protected from the effects of storm runoff erosion and shall be of a character so as to cause the slope to blend with the surrounding terrain and development.

Policy NR 6.3.2: Appropriate control measures shall be required to limit erosion during and immediately subsequent to new construction.

Implementation 1: Continue to enforce erosion and sediment control measures for new construction. Periodically update these measures.

NATURAL RESOURCES (NR) GOAL 7: Development sensitive to surface water resources

OBJECTIVE NR 7.1: Hill development with minimal impacts on streams

Policy NR 7.1.1: Ensure that Hill Planning Area development is planned and implemented to limit negative impacts on hill area waterways and adjacent riparian zones. See Land Use Chapter, "Hill Planning Area" for implementation measures.

OBJECTIVE NR 7.2: Maximize the biological, aesthetic and recreational benefits of natural water courses, flood control and water recharge facilities

Policy NR 7.2.1: Review proposed projects affecting natural or man-made waterways to promote their aesthetic, recreational and biological benefits, consistent with flood control and recharge objectives.

Implementation 1: Consider adopting incentives for private development, and public agencies to adopt improvements to waterways exceeding customary costs and that have clear recreational and aesthetic benefits to City residents.

Policy NR 7.2.2: Encourage water agencies (ACWD and ACFCWCD) to improve the natural characteristics of their existing water and flood control facilities.

Implementation 1: Work with ACWD and ACFCWCD to identify waterways with potential for improving biological, aesthetic and recreational character. Encourage these agencies to devote necessary resources to improving the quality of these areas.

Implementation 2: Identify State and Federal sources, and consider the use of local funding sources to upgrade the character of existing water and flood control facilities.

NATURAL RESOURCES (NR) GOAL 8:
High quality water

OBJECTIVE NR 8.1: Retention of existing water quality in Alameda Creek

Policy NR 8.1.1: Discourage projects in the Alameda Creek watershed with potential negative impacts on Alameda Creek water quality.

Implementation 1: Work with the Alameda County Water District (ACWD) to evaluate proposals for wastewater disposal in the Tri-Valley area for potential impacts on Alameda Creek. Take necessary actions to discourage disposal alternatives with potential negative impacts on water quality in the Creek.

Implementation 2: Discourage development in areas under the County's jurisdiction that could affect the water quality in the Sunol Valley or its surrounding watershed lands.

Implementation 3: Continue to enforce regulations barring the transportation of hazardous materials through Niles Canyon.

OBJECTIVE NR 8.2: Water quality suitable for recreation and wildlife in Lake Elizabeth and in ponds (See Parks and Open Space Chapter for policies and implementation measures)

Policy NR 8.2.1: Work with ACWD and EBRPD to maximize the recreational and habitat values of the Alameda Creek Quarries, consistent with recharge needs.

Implementation 1: Review development plans for the Quarries and work closely and cooperatively with EBRPD and ACWD to implement this policy.

Policy NR 8.2.2: Ensure that the extension of BART through Tyson's lagoon (wetlands between Walnut Avenue and Stevenson Boulevard) and underground through Central Park protects the habitat, scenic values, water quality and flood control capacity of the lagoon and Lake Elizabeth. Potential negative impacts on these water resources shall be fully mitigated.

Implementation 1: Evaluate development plans for the BART extension in regard to their consistency with achieving the above policy. Work with BART to identify appropriate development strategies or mitigations to implement this policy.

OBJECTIVE NR 8.3: Protection from contamination of the Niles Cone aquifer underlying Fremont (source of much of Fremont's drinking water)

Policy NR 8.3.1: Manage the storage of hazardous materials, and especially underground tanks to ensure a minimum of leakage or spills.

Implementation 1: Enforce regulations regarding handling and storage of hazardous materials.

Implementation 2: Periodically review regulations to ensure up-to-date standards.

Implementation 3: Consider the establishment of buffers between development and recharge areas to prevent contamination of the groundwater supply from urban pollutants.

Policy NR 8.3.2: The use of reclaimed water for irrigation or other purposes should be managed so as to not have an adverse impact on the Niles Cone.

Implementation 1: Reclaimed water should either be of sufficient quality or should be used in areas of the City where it will not have a negative impact on groundwater.

Policy NR 8.3.3: Encourage the Water District to monitor water quality in the Niles Cone.

Implementation 1: Periodically consult with the Water District regarding maintenance of water quality in the Niles Cone.

Implementation 2: Continue to inform the Water District of any development proposals which could have a negative effect on groundwater.

OBJECTIVE NR 8.4: Protection of San Francisco Bay water quality

Policy NR 8.4.1: Support the Alameda County Urban Runoff Clean Water Program.

Implementation 1: Develop and implement control and mitigation measures consistent with the Agreement to Implement the Alameda County Urban Runoff Clean Water Program.

NATURAL RESOURCES (NR) GOAL 9:
A mix and balance of land uses which conserves energy and reduces the need for commuting and auto use

OBJECTIVE NR 9.1: **A significant reduction in the imbalance of jobs and housing in Fremont**

Policy NR 9.1.1: Retain sufficient industrial and commercial land to provide for a significant increase in employment in Fremont.

OBJECTIVE NR 9.2: **Neighborhood commercial areas convenient to homes**

Policy NR 9.2.1: Designate sufficient land for neighborhood commercial centers to provide convenience goods near homes.

Implementation 1: Review the land use plan to assess the need for additional land designated for neighborhood commercial centers in underserved areas of the City.

OBJECTIVE NR 9.3: **Higher intensities of housing and commercial uses accessible to transit**

Policy NR 9.3.1: Focus higher intensity residential and commercial uses along streets served by transit and near BART stations.

NATURAL RESOURCES (NR) GOAL 10: Building and site design standards which conserve energy

OBJECTIVE NR 10.1: A decrease in the household and employee consumption of energy through increases in energy efficiency in buildings and site design

Policy NR 10.1.1: Continue to provide public information on energy regulations for buildings and on programs for energy conservation and increasing energy efficiency.

Policy NR 10.1.2: Continue applying State standards for energy conservation in new construction.

Policy NR 10.1.3: Encourage maximum feasible energy efficiency in site design, building orientation, landscaping, and development of recreation facilities.

Implementation 1: Encourage solar heating of swimming pools.

Implementation 2: Review proposals for buildings over three stories for potential solar access impacts.

Policy NR 10.1.4: Encourage private developers to provide a choice of energy sources (i.e., natural gas and electricity) in buildings so that consumers may choose the most efficient energy source for any particular need.

NATURAL RESOURCES (NR) GOAL 11:
Alternatives to the single occupant auto (this goal is addressed in the Transportation Chapter)

NATURAL RESOURCES (NR) GOAL 12: Air quality meeting State standards

OBJECTIVE NR 12.1: Improved air quality

Policy NR 12.1.1: Support the BAAQMD's efforts to monitor and control air pollutants from stationary sources.

Implementation 1: Continue to require industrial projects with potential air quality impacts to obtain necessary permits from the BAAQMD.

Policy NR 12.1.2: The development of land uses considered to be sensitive to poor air quality shall be discouraged adjacent to potential air quality problems (hot spots).

Implementation 1: Sensitive receptors such as nursing homes, childcare centers, schools and health care facilities shall be discouraged from locating adjacent to major intersections projected to be congested.

Policy NR 12.1.3: Monitor and review air quality relative to State standards.

Implementation 1: Periodically review available information on the state of air quality in the City of Fremont.

Implementation 2: Review proposed projects for their potential to affect air quality conditions during the environmental impact process.

Policy NR 12.1.4: Enforce City policies and regularly review and update policies on the use, transport and storage of hazardous materials with potential for impacts on air quality and health.

Implementation 1: Review truck and train routes for the potential to affect sensitive receptors in the event of an accident involving hazardous materials. Consider conducting an

outreach program to such sensitive receptors as hospitals and homes for the elderly and recommend they prepare an adequate evacuation plan.

Policy NR 12.1.5: Coordinate air quality planning efforts with other local, regional and state agencies.

Implementation 1: Review and comment upon air quality planning efforts by regional and State agencies.

Implementation 2: Review environmental impact reports of large projects in neighboring communities with the potential to affect Fremont's air quality. Request appropriate mitigations.

Policy NR 12.1.6: Reduce the air quality impacts of transportation (see the Transportation Chapter for implementation measures related to encouraging alternatives to the single occupant autos, and others).

Implementation 1: Consider phasing in the use of alternative fuels and electricity for local government vehicles to reduce air emissions. Continue to optimize maintenance of fleet vehicles to reduce air emissions.

Policy NR 12.1.7: Reduce particulate emissions.

Implementation 1: Reduce emissions from construction of roads and buildings through enforcement of construction practices that reduce dust and other particulate emissions.

Policy NR 12.1.8: Reduce emissions through energy conservation.

Implementation 1: Encourage energy conservation features in new development (see Energy section of this Chapter for specific measures).

NATURAL RESOURCES (NR) GOAL 13:
A distinctive, positive visual image for Fremont

OBJECTIVE NR 13.1: Preservation of the visual character of the City's Open Space frame and other unique natural visual elements of Fremont. The Frame includes the Hill Face, Bay lands, Alameda Creek flood control channel and adjacent publicly owned open space areas (Ardenwood Regional Park, Alameda Creek Quarries). Other unique natural elements include Central Park and Lake Elizabeth and Landmark Trees. (See the Land Use and Open Space Chapters for many policies and implementation measures related to the Open Space Frame)

Policy NR 13.1.1: Seek permanent protection of unique visual elements within the City. Minimize any negative development impacts on the visual characteristics of the resource when permanent protection is not feasible.

Implementation 1: Prepare and adopt guidelines for visual impact assessments. Conduct a visual impact assessment of any proposed public or private project on an identified visual resource. Mitigate negative visual impacts to the degree feasible.

Implementation 2: Consider adopting standards for structures and landscaping on the Hill Face, to minimize contrast and reduce visual impacts.

Policy NR 13.1.2: Maximize retention of Landmark Trees on public and privately owned lands (see Landmark Trees).

Implementation 1: Continue to apply the City's tree preservation and landmark tree ordinance (for definition, discussion and list of existing

trees, see the 1973 report "Landmark Trees of the City of Fremont" available at the Community Development Department).

Implementation 2: Use transfer of development rights, site design strategies, and the density bonus provisions of this General Plan to conserve Landmark trees whenever feasible.

OBJECTIVE NR 13.2: Conservation and enhancement of natural gateways. Natural gateways are defined as: Mission Pass, Niles Canyon and State Route 84 through Coyote Hills

Policy NR 13.2.1: Protect the natural gateways of the City through project review and encouragement of appropriate design.

Implementation 1: The visual impacts of projects adjacent to or that affect the visual character of defined gateway areas shall be assessed prior to approval. Sensitive areas are considered to be the land on either side of I-680 east of Mission Boulevard, land on either side of SR 84 within a half mile east of the toll plaza, and land on either side of SR 84 east of Mission Boulevard.

Implementation 2: For developments within defined sensitive areas, the City shall strongly encourage a positive visual image that enhances the gateway character of these areas. Structures that intrude upon the natural character of Gateway areas shall be avoided.

Implementation 3: Review proposed projects on land under the County's jurisdiction in sensitive areas for visual impacts. Seek mitigation of any visual impacts, especially in the State designated scenic route in Niles Canyon.

OBJECTIVE NR 13.3: A high quality visual environment

Policy NR 13.3.1: Reduce the visual impacts of signs, utility lines and poles.

Implementation 1: Maintain standards for signs to reduce their impact on the natural scenic character of the City and retain a strong, positive visual image for Fremont.

Implementation 2: Continue to promote undergrounding of utilities, and require undergrounding of utilities in new development.

NATURAL RESOURCES (NR) GOAL 14: Visual access to scenic resources

OBJECTIVE NR 14.1: Visual access to scenic resources from designated scenic routes

Policy NR 14.1.1: The following routes are designated scenic routes for the City of Fremont: I-680, State Route 84 through Niles Canyon, State Route 84 from the western City limits to I-880, Mission Boulevard, Paseo Padre Parkway, Fremont Boulevard, Mowry Avenue, Stevenson Boulevard, Warm Springs Boulevard and Washington Boulevard. The BART alignment is also considered a scenic route (see Figure 9-9).

Policy NR 14.1.2: The impacts of development on the scenic character of scenic routes and on the routes visual access to scenic resources shall be considered prior to approval of industrial and commercial projects adjacent to scenic routes.

Implementation 1: Visual impact assessments shall be conducted for projects over two stories high adjacent to a scenic route. Guidelines for scenic impact assessment shall be prepared.

Implementation 2: Proposed uses that could have a negative impact on the quality of the visual character of an area adjacent to a scenic route shall be required to screen or in other ways limit the visual impacts of the use.

Policy NR 14.1.3: The impacts of soundwall development on the scenic character of scenic routes and on visual access to scenic resources shall be considered prior to approval of soundwalls along scenic routes.

Implementation 1: Guidelines for the assessment of the visual impacts of soundwalls shall be prepared.

Policy NR 14.1.4: Maintain adequate landscaping for scenic roads to enhance their scenic character.

Implementation 1: For designated scenic routes, maintain theme trees as defined by the 1975 "Scenic Highways Element", as amended, and included as Appendix II of this plan. Replace trees as necessary.

Policy NR 14.1.5: Evaluate and consider the impacts of any significant roadway modification (including any grade separations) on the scenic character of scenic routes and on visual access to scenic resources.

Implementation 1: Proposed significant modifications in roadway width or in character shall be considered during the environmental assessment process.

OBJECTIVE NR 14.2: Visual access to scenic resources from community commercial areas

Policy NR 14.2.1: Consider the impacts of development in community commercial centers on visual access to visual resources as part of public planning processes.

Implementation 1: Specific plans, design and development plans for Community Commercial (CC) Areas shall consider the establishment of visual corridors from public sidewalks and plazas to natural visual resources (and especially the hills). These plans shall also consider establishing appropriate building heights and design guidelines to conserve visual access to these resources.

Implementation 2: While plans are prepared, the visual impacts of buildings over two stories in CC areas shall be evaluated prior to approval.

OBJECTIVE 14.3: Visual access to scenic resources from the Central Business District

Policy NR 14.3.1: Consider the need for visual corridors in the preparation of design and development plans for the CBD (see Land Use Chapter for implementation measures).

Chapter 10
Health and Safety

INTRODUCTION

The purpose of the Health and Safety chapter of the General Plan is to reduce the risks associated with environmental hazards and protect the community's health from the affects of noise and other environmental hazards. The Chapter also assesses the City's current preparedness in regard to emergencies, and the need for providing additional protective measures.

The chapter is divided into sections related to each of the following issues:

Geologic Hazards
Seismic Hazards
Flood Hazards
Fire Hazards
Hazardous Material and Waste and Other Safety Issues
Emergency Preparedness
Noise

Each section is divided into two parts:

- Setting: identification of existing conditions for each issue.
- Projection: expected conditions in regard to the hazard or condition. Projections in regard to hazards are, at best, a guess about when a potential hazard will become a problem based on the relative frequency of past events.

The final section of this chapter, presents the City's goals, objectives, policies and implementation measures for addressing the hazards and conditions that potentially threaten the community's health and safety.

GEOLOGIC HAZARDS

Setting

Geologic conditions must be taken into account in the planning and development of any parcel of land. The danger to property and health increases when property is developed in ways which are unsuitable to geologic conditions. When structures or roads are built on geologically

unstable land such as landslide areas, unstable slopes or areas subject to subsidence, there is an increased risk to the community.

Generalized Geology and Physical Characteristics

Much of Fremont is flat, unsloped land underlain by a relatively stable geologic formation. Underlying Fremont is a deep bedrock trough which rises to form the steep hills in the eastern part of the City and the Coyote Hills at the Bay margin. This trough has been filled with alluvium deposited by streams flowing from the hills, and with Bay mud sediments.

Moving from east to west, subsurface materials include progressively more clay and silt and less sand and gravel. In most areas these materials are mixed, due to the wandering pattern of stream beds. Ground water, another important geologic consideration, is relatively high east of the Hayward Fault (see Figure 10-5 for location) due to the impervious barrier formed by the pulverized materials of the fault zone. West of the fault the water table level is substantially lower, rising again near the Bay.

Slope Instability

Most sloping land has some potential for slope instabilities leading to landslides or mudslides. Slope stability is affected by several factors including steepness of slope, weak or unconsolidated soil units, formations with a high clay content, water saturation, vegetation removal, and seismic activity. Usually a combination of several factors will cause a sloped hillside to fail, with a single factor such as heavy rainfall or an earthquake being the catalyst responsible for initiating slope failure.

Landslides

An extensive area of historic landslides lies along I-680 south of Curtner Road, in Niles Canyon and on the westerly slopes of Mission Peak, Mt. Allison and Monument Peak. Although most landslides are natural occurrences, some damaging landslides result from human carelessness or improper construction. Development activity on sites susceptible to landslides can trigger landslide activity, particularly when the natural slope has been steepened or the toe of the slope has been cut away for road or building construction. Buildings and roads located on sites where landslides have previously occurred or where landslide susceptibility is high have an increased potential for property loss and human endangerment.

When slopes fail and landslides occur in developed areas, creeks and streams below the slide area may become dammed with slide debris and result in flooding. Additionally, landslides often block major access roads in the hill area due to slope failure. This has occurred in the past on major single access roads in the City such as Morrison Canyon Road, Mill Creek Road, I-680, Niles Canyon Road and Sabercat Road which lie downhill from areas subject to landslide and slope instability.

In the past, development in Fremont's sensitive hill areas consisted of scattered rural residences, ranch and farm buildings; few dwellings or related structures were in areas of high landslide potential. In the past few years, more residential development has occurred on hillside ranch land in the eastern portion of the City increasing the number of dwelling units exposed to the hazards of potential landslides.

The City's policy is to require site specific geologic investigations and soils reports be prepared and submitted during the development review process for sites prone to geologic hazards. These studies must recommend measures to mitigate any potential hazards related to building construction or grading. The City's consulting geologist reviews the submitted reports for acceptability, and projects must be built according to the recommendations of the City geologist. Grading plans are reviewed for conformance with the City's grading ordinance. In unstable areas the City seeks to minimize grading of slopes and limit it to where it is essential for development. The grading plan also includes procedures to improve slope stability and must follow accepted engineering design standards.

Mudslides

Mudslides are shallow landslides saturated by water that travel rapidly downslope as muddy slurries. Mudslides commonly travel at speeds greater than 20 mph, although in some areas speeds in excess of 100 mph have occurred. They flow like water and typically follow water courses. Most mudslides are localized in small gullies threatening only few buildings in their direct path. They are often overlooked hazards because they can travel thousands of feet or even miles from the source and may occur in areas with no known previous mudslides.

Mudslides are most likely to occur on steep loose soils that are saturated with water. Most rainstorms are of such low intensity that mudslides do not occur although in January of 1982 thousands of mudslides were triggered in the Bay Area by intense rainfall. Mudslides can also be triggered by broken water pipes or misdirected runoff. Most mudslides originate in areas where vegetation has been removed. Hilly areas denuded by wildfire are especially susceptible.

Subsidence

Prolonged pumping of groundwater can lower the water table over a large area and contribute to subsidence, or extreme ground failure, unrelated to earthquake activity. Even though the groundwater level has been lowered within Fremont due to pumping, no subsidence or other effects have been noted at the ground surface related to water withdrawal. A program of groundwater recharge has been underway for several years under the direction of the Alameda County Water District, and groundwater levels are now stable.

Subsidence is most likely to occur in Fremont in areas of moderate to high liquefaction potential related to earthquake activity. Liquefaction and this form of subsidence are discussed in the next section on Seismic Hazards.

Projections

Areas of Potential Landslides and Slope Instability

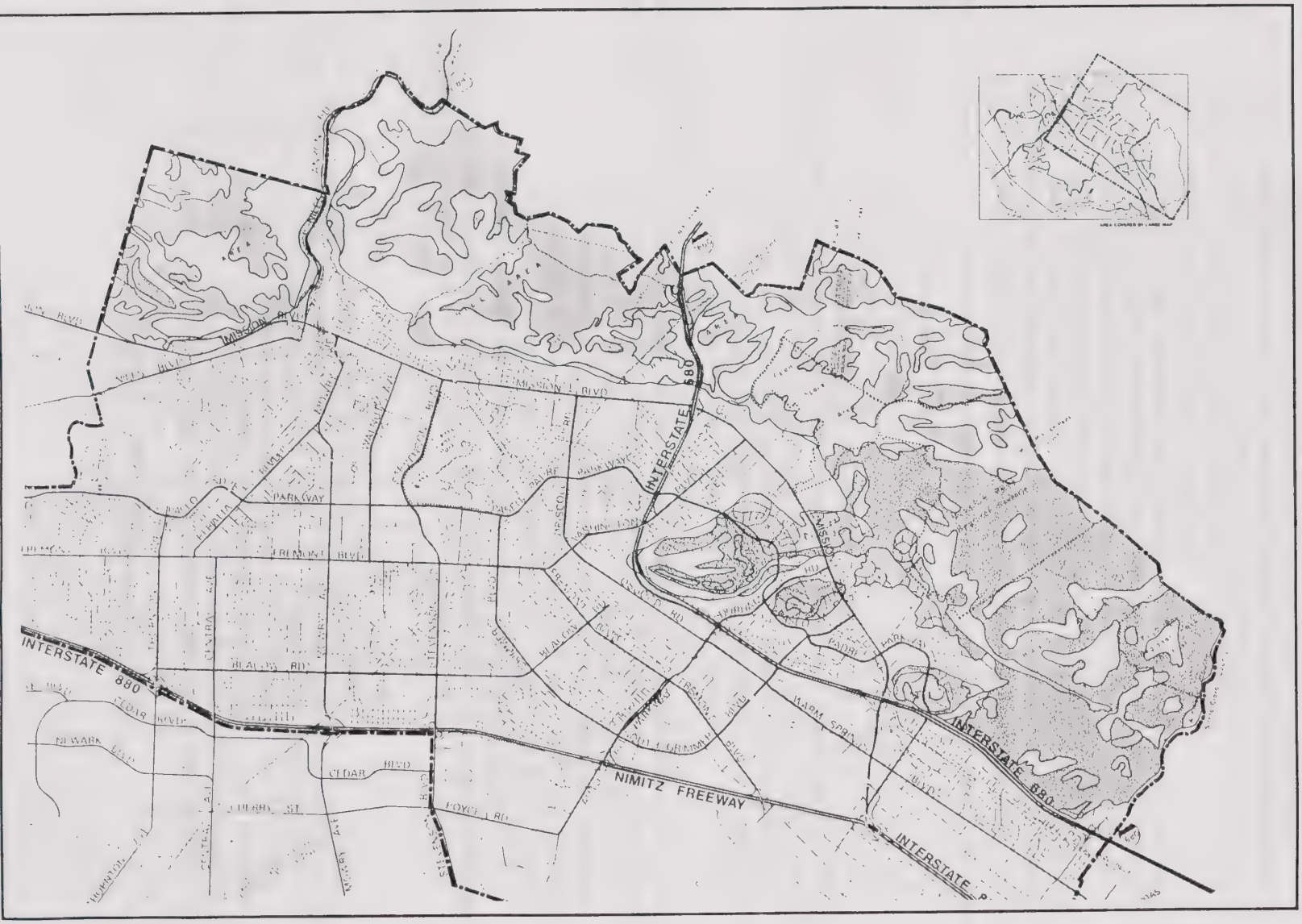
Landslides may occur at any time but are more likely during the rainy season. Earthquake shaking increases the likelihood of landslides and the potential for increased damage, injury, disruption of utilities and blockage of access. An earthquake occurring in late winter when soils are highly saturated with water would be the most hazardous in terms of landslide danger.

The eastern Hill Area of the City has the most potential for landslides or other slope instabilities. The Slope Instability Map, Figure 10-1, indicates the potential for landsliding or other slope instabilities. It is based on the steepness of slopes and underlying geology (see the Health and Safety background report for more details). The map is general in nature; the potential for landsliding on individual parcels must be determined by site specific geotechnical analysis. The map shows the following general categories of slope instability:

I_3 Areas classified as I_3 have potential for localized landsliding or slope instabilities over a widespread area. In these areas, more than half of the land is estimated to have some slope stability problems. However, landslides will tend to be relatively small: usually less than 50 feet long affecting one or two parcels.

I_2 Areas classified as I_2 have potential for major landslides in localized areas. The size of potential landslides in these areas can be several hundred feet long and can involve areas of several acres. Within this category it is expected that slope stability problems will affect roughly 25 to 50% of the land.

I_1 Areas classified as I_1 have the potential for localized landslides.



FREMONT GENERAL PLAN

HEALTH AND SAFETY SECTION

SLOPE INSTABILITY

LEGEND

I_1 POTENTIAL LOCALIZED LANDSLIDES

I_2 POTENTIAL MAJOR LANDSLIDES IN LOCALIZED AREAS

I_3 POTENTIAL LOCALIZED LANDSLIDES OVER WIDESPREAD AREAS

SOURCE: Woodward-Clyde Associates, 1975;
Earth Sciences Associates 1978
Earth Systems Consultants 1985
Bay Area Transit Consultants 1988A &
City of Fremont 1990

CITY OF FREMONT BOUNDARY

0 1500 3000

NORTH

BASE MAP DATE MAY, 1989
SLOPE INSTABILITY DATA AUGUST, 1990

Adopted by City Council May 7, 1991

Geologically Constrained Land

There is relatively little unconstrained vacant residential land remaining in Fremont for new development. In the future, a larger proportion of all development will be in areas with geologic constraints. Careful investigation of geologic conditions will be an increasingly important prerequisite to development. Supervision of the development process is also necessary to ensure that required mitigations for geologic conditions are implemented and proper engineering practices are followed in grading.

SEISMIC HAZARDS

Earthquakes are a recurrent phenomenon in the western mountain and coastal areas of California. The western edge of California is at the boundary between two of the "plates" that constitute the earth's crust. The occasional release of accumulated strain between these plates is expected to generate earthquakes in California indefinitely. Severe earthquakes can cause widespread direct damage due to shaking and ground failure. They can also cause severe secondary damage, including fires and flooding (due to dam failure).

While cities in coastal California can reduce earthquake damage with proper design and engineering of structures, it is not possible to eliminate the danger, as recent experience during the October, 1989 earthquake has amply demonstrated. This section discusses the risks the City of Fremont faces in regard to earthquakes, and its actions to address that risk.

Setting

The Bay Area is crossed by several faults which are part of the San Andreas Fault system. The San Andreas fault travels through much of the coastal areas of California, traversing San Mateo County, east of Fremont (see Figure 10-2). The San Andreas fault is the largest fault in California with the potential for the most severe earthquakes. Fremont is traversed by the Hayward fault, a "branch fault" of the San Andreas system. Another branch fault of the San Andreas fault in the vicinity of Fremont is the Calaveras fault on the eastern edge of the Diablo Range.

A seismic event (an earthquake) on any of these major faults could cause damage in Fremont. The amount of resulting damage would be dependent on the magnitude of the earthquake, localized soil conditions and the proximity of development to the focus or epicenter of the earthquake.

Earthquake Measurement

The strength and severity of earthquakes are measured by two seismic scales, the Richter Scale and the Modified Mercali (MM) Scale. Earthquake magnitude at the epicenter (the point on the ground surface above the point of initial energy release) generally is recorded on the Richter scale, a logarithmic scale related to seismograph readings. A quake of magnitude 7.0 on the Richter Scale at the epicenter may be felt as different intensities depending on distance from the epicenter, soil and rock conditions, and other geographic or geologic factors.

The Modified Mercali (MM) Scale is a partly subjective measurement based on the effects of an earthquake on man-made structures, people and topography. This scale can provide a useful measurement of earthquake intensity throughout the area where the quake is felt.

Earthquake Fault Activity and Identification

The identification of earthquake hazards in Fremont requires a description of the secondary effects of earthquake activity caused by the sudden movement along a fault line. These secondary effects consist of: 1) groundshaking; 2) surface rupture or ground displacement along fault traces; 3) ground failure; and, 4) seismically induced water inundation.

Groundshaking is the surface wave motion caused by the passage of seismic waves through the earth's outer crust during an earthquake. Surface rupture or ground displacement is the fracture of soil or rock on the earth's surface. Earthquake induced ground failure occurs when the ground looses its cohesive nature and bearing strength due to the instability of the soil or rock. Ground failure may take the form of landslides, mudslides, liquefaction, rock falls or subsidence.

Subsidence or differential settlement is the downward movement of soil caused by a shift of the underlying sediments which results in a depression in the soil surface. Subsidence often occurs in areas affected by liquefaction during strong seismic shaking. **Liquefaction** is the process of saturated loose soils becoming liquid or "quick" under earthquake shaking. Under such conditions, the soil loses its bearing strength and may settle or flow much like quicksand.

The potential for groundshaking and liquefaction depends largely on the underlying geology. Groundshaking potential is closely related to depth to bedrock formations, cohesion, and density of sediments down to the bedrock.

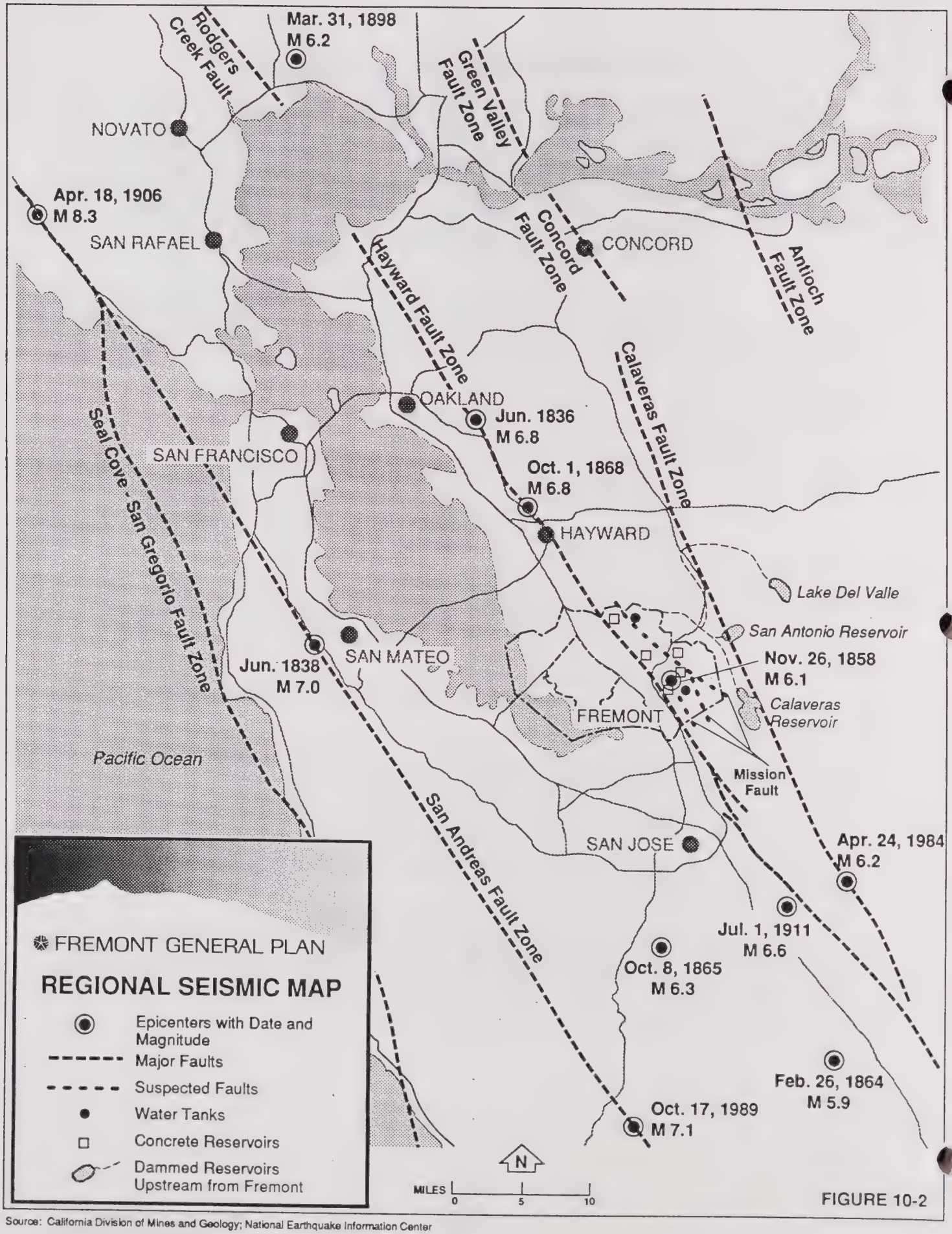
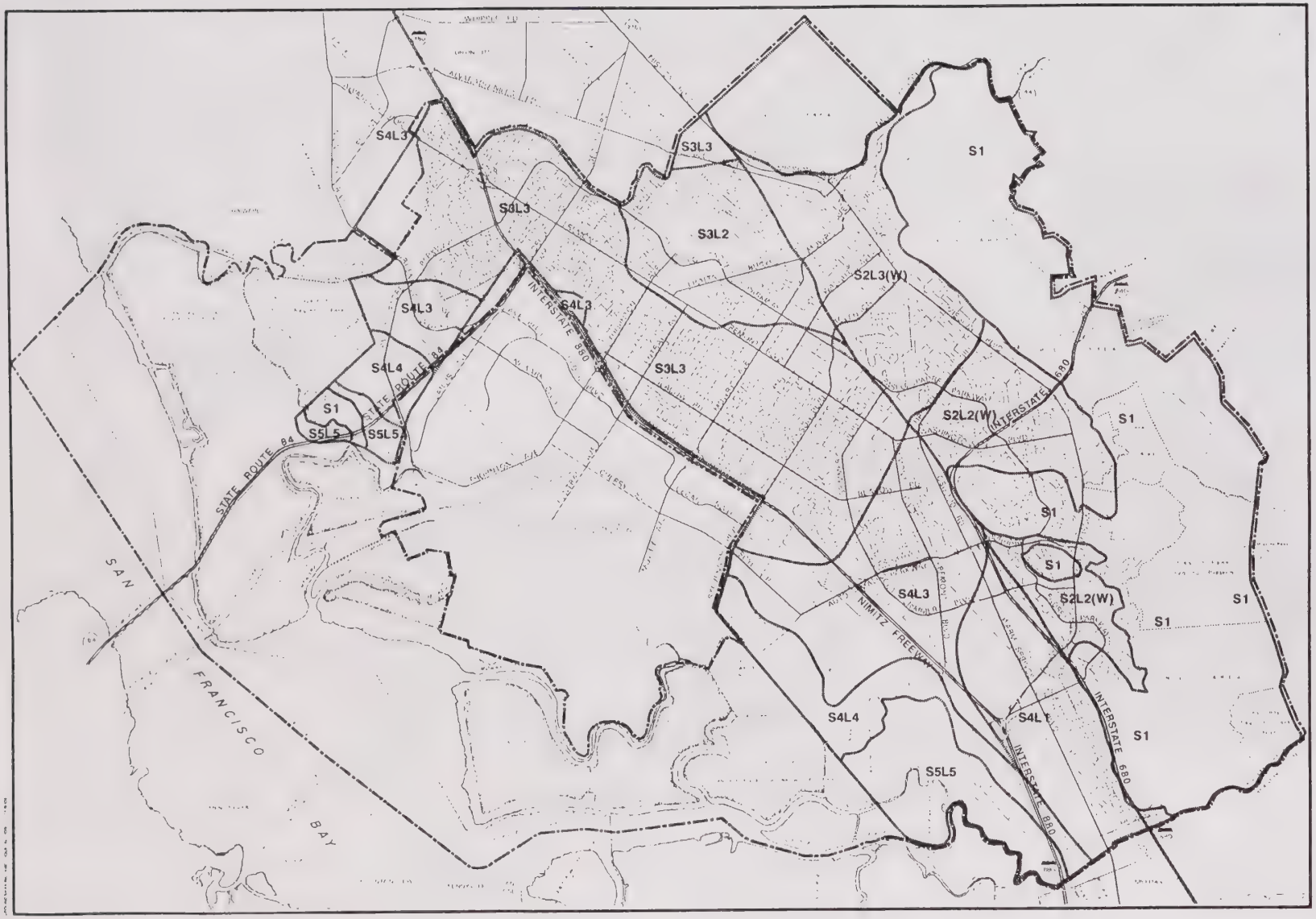


FIGURE 10-2

Source: California Division of Mines and Geology; National Earthquake Information Center

The potential for seismically generated ground failures is greatly increased if an earthquake occurs during a period of heavy rainfall, when hillside slopes are saturated and the ground water table is closer to the surface. The potential for liquefaction is affected by the severity of groundshaking, topography, and geologic conditions near the surface. Liquefaction commonly occurs in soils composed of layers of silt or sand sediments or where poorly compacted fill has been used. In Fremont, water-saturated soils or bay mud in the Baylands and wetland areas of the western portion of the City are particularly susceptible to liquefaction.

Groundshaking and liquefaction potential are shown on Figure 10-3. The areas mapped relate to generalized underlying geologic conditions described in Table 10-1. The groundshaking and liquefaction potential categories are arranged in order of probability of occurrence. These maps are generalized; more specific assessment of groundshaking and liquefaction potential is necessary to determine the magnitude of risk for any particular parcel of land. No liquefaction potential has been assigned in the Hill Area and Coyote hills which are underlain by bedrock and not subject to liquefaction.



FREMONT GENERAL PLAN

HEALTH AND SAFETY SECTION

GROUNDSHAKING AND LIQUEFACTION POTENTIAL

LEGEND

SHAKING POTENTIAL

S5	SEVERE ON SOME SITES
S4	MODERATE TO HIGH
S3	LOW TO MODERATE
S2	LOW
S1	LEAST SEVERE

LIQUEFACTION POTENTIAL

L5	HIGH
L4	MODERATE TO HIGH
L3(W)	VARIABLE (high to low) depending on depth of groundwater, soil conditions and topography
L3	VARIABLE (high to low) depending on depth of groundwater
L2(W)	LOW EXCEPT WHERE SATURATED SANDS ARE FOUND IN STEEP TOPOGRAPHY
L2	LOW EXCEPT IN MARSHY AREAS
L1	LOW

NOTE NO LIQUEFACTION POTENTIAL RATING IS SHOWN FOR BEDROCK FORMATIONS

CITY OF FREMONT BOUNDARY

SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

NOTE THE INFORMATION REGARDING LIQUEFACTION SHOWN ON THIS MAP IS GENERALIZED THE DESIGNATIONS SHOWN DO NOT NECESSARILY APPLY TO EVERY PROPERTY WITHIN THAT ZONE THOSE USING THIS MAP SHOULD ALSO REFER TO THE SPECIFIC INFORMATION REVIEWED FOR EACH DEVELOPMENT

0 2000 4000

NORTH

Adopted by City Council May 7, 1991

C.C. RESOLUTION NUMBER	DATE AMENDED	C.C. RESOLUTION NUMBER	DATE AMENDED

BASE MAP DATE MAY, 1989

GROUNDSHAKING AND LIQUEFACTION AUGUST 1990

Table 10-1
Underlying Geologic Conditions

	Geology and Site Conditions	Impact
S_1	Bedrock formation	Least severe shaking potential
S_2	Dense cohesion less soils. Depth to bedrock varies from less than 10 feet to 200-300 feet.	Low shaking potential, but somewhat more severe than in Area S_1.
S_3	Dense cohesionless soils. Depth to bedrock 400-600 feet.	Moderate shaking potential, somewhat severe than in Area S_2.
S_4	Medium to stiff cohesionless soils. Depth to bedrock 400 feet; shallower near Coyote Hills.	Moderate shaking potential; but more severe than in Area S_2, possibly somewhat more severe than in Area S_3.
S_5	Underlain by soft to medium cohesionless soils in upper 50 feet. Depth to bedrock 400 feet or greater.	Severe shaking on some sites.
	Liquefaction	
L_1	Stiff clays. Shallow groundwater (5-20 feet): considerable perched water.	Low liquefaction potential
L_2	Clay, silts sand in upper 15-20 feet, gravel and sand below. Marshy areas near Hayward Fault. Groundwater to 30-60 feet below surface.	Liquefaction potential low except in marshy areas along Hayward Fault.
L_2(w)	Stiff clays and dense sands (alluvial or residuum above rock). Groundwater at 20 feet or deeper. Some perched water.	Low liquefaction potential except where saturated sands are found in steep topography.
L_3	Clay, silt, sands in upper 50 feet, sand and gravel below. Groundwater 30-60 feet below surface; perched water at 5 feet below surface.	Low to high liquefaction potential depending on depth to groundwater. Minor to moderate differential settlements could occur.
L_3(w)	Variable mixture of clays and loose to medium silts and sands in the upper 20 feet. Deeper soils on sand-gravel mix. Groundwater varies from 5 to 40 feet below surface.	High to low liquefaction potential depending on depth to groundwater, soil conditions and topography.

L_4	Stiff clays with silt and sand lenses. Shallow groundwater (5-20 feet).	Moderate to high liquefaction potential.
L_5	Recent Bay Mud, overlying older alluvium and older mud. Groundwater at 3-10 feet below surface.	High liquefaction potential

Source: U.S. Geological Survey, *Probabilities of Large Earthquakes Occurring in California on the San Andreas Fault*, Open File Report 88-398, Menlo Park, California, July 1988.

Woodward-Lundgren & Associates, *Geotechnical Studies, South County Hall of Justice, Fremont, California*, 15 May 1974.

Seismically induced water inundation results when severe groundshaking causes waves or seiches in a confined body of water to overflow the banks and flood the surrounding area. Typically, the waves created by groundshaking are less than one foot high and may affect only the immediate shoreline of a creek, stream or lake. In the unlikely event that an earthquake caused seiche occurred in the Bay west of Fremont, waves would run up on the undeveloped shoreline area.

Special Studies Zones

The Alquist-Priolo Hazard Zones Act passed by the State legislature in 1972 established Special Studies Zones along faults considered by the State Division of Mines and Geology to be active or potentially active. An active fault is defined as an area which has experienced surface displacement during recent geologic time (within the past 10,000 years), indicating further movement might occur. A potentially active fault is an area showing evidence of surface displacement during Quaternary time or the last 2 million years.

The Special Studies Zone extends for 50 feet in width on either side of an identified fault or fault trace, or one-eighth mile on either side of a mapped fault trace, as designated by the State. When development for human occupancy is proposed within a Special Studies Zone a geotechnical investigation relating to seismic hazards is required and must be submitted to the City for review. The geotechnical study, prepared by a registered geologist, recommends grading and building procedures to reduce risk. The study is reviewed for adequacy by the City's consulting geologist prior to final project approvals. Development for human occupancy is not permitted within 50 feet of an identified fault. In addition, this plan prohibits the construction of attached garages within 50 feet of an identified fault.

The Hayward fault is the only area within the City currently designated as a Special Studies Zone by the State (Figure 10-4). Two other faults in Fremont, the Mission fault and the Silver Creek fault, were removed from this designation by the State due to lack of data indicating surface displacement.

Historical Seismicity

The Fremont area has been shaken by moderate to severe earthquakes an estimated sixty times in the recorded history of the area. Many of these earthquakes were centered on the San Andreas fault rather than the Hayward fault, but nonetheless caused damage in the East Bay.

Two major quakes generated by movement on the Hayward fault struck Fremont during the 1800's. The largest earthquake related to the Hayward fault in recent history occurred in 1933, centered near the mouth of Niles Canyon. According to the U.S. Geologic Survey and the State Geologist, the maximum earthquake intensity predicted to be produced by the Hayward fault would be an event of 7.5 magnitude on the Richter scale.

Because maximum quake magnitude is related to fault length, the highest magnitude quakes are expected on the San Andreas Fault where quakes above 7.5 have occurred and are expected to occur in the future. The 1906 earthquake on the San Andreas fault (estimated intensity 8.3 on the Richter Scale) caused considerable damage in Fremont, particularly to brick structures in Centerville and Irvington. The most recent major quake along the San Andreas fault occurred in October 1989. This earthquake, known as the Loma Prieta earthquake, had a magnitude of 7.1 on the Richter Scale, and caused groundshaking in Fremont. Locally, only minor structural damage was reported among historical structures and a few utility lines were ruptured. Some landslides triggered by the groundshaking were reported in uninhabited hillside areas. The rain which followed a few days after the quake further dislodged unstable landslide areas, creating mudslides in the hill area and on local streets.

The Calaveras fault branches from the San Andreas fault near Hollister and follows a somewhat more northerly course than the Hayward fault, passing through the Mount Hamilton-Diablo range. Movement on this fault has generated earthquakes felt in the Fremont area. In addition, activity on the Calaveras fault has caused displacement on the Hayward fault leading to minor damage to pavement in the Central Park area of City.

Historic information shows three moderate to strong earthquakes have occurred along the Calaveras fault: the 1861 San Ramon Valley earthquake, the 1979 Gilroy earthquake, and the 1984 Morgan Hill earthquake. Seismologists estimate a maximum credible earthquake of 7.0 for the Calaveras fault.

FREMONT GENERAL PLAN

HEALTH AND SAFETY SECTION

SEISMIC ZONES

LEGEND

POTENTIALLY ACTIVE FAULTS: Faults considered to have been active during Quaternary Time

- ACCURATE LOCATION
- APPROXIMATE LOCATION
- INFERRED LOCATION
- CONCEALED FAULT; QUERY (?) INDICATES ADDITIONAL UNCERTAINTY
- 1868 C — EVIDENCE OF HISTORIC OFFSET - YEAR OF EARTHQUAKE ASSOCIATED EVENT OR "C" FOR DISPLACEMENT CAUSED BY CREEP OR POSSIBLE CREEP
- SPECIAL STUDIES BOUNDARIES
- AERIAL PHOTO LINEAMENTS (not field checked) Based on youthful geomorphic and other features believed to be the results of quaternary faulting

SOURCE FP Associates, 1990
City of Fremont, 1990

CITY OF FREMONT BOUNDARY

0 1500' 3000'

BASE MAP DATE: MAY, 1989
SEISMIC DATA AUGUST, 1990

FIGURE 10-4

Areas of Potential Seismic Hazard

Relatively few residences, commercial or industrial buildings are found over or within 50 feet of the mapped trace within the City (see Figure 10-5, Seismic Zones Map). This is due to current siting requirements in the City's policies and regulations, and the marshy conditions found in areas along much of the Hayward fault trace. Any development over the Hayward Fault traces predated the establishment of Special Studies Zones. Much of the land traversed by the active Hayward fault trace is in public open space or is intended for such use in the future.

The City Government Building site in Central Park located between two fault traces, was studied thoroughly to determine the exact fault locations. When the building was developed in the late 1960's, it was specially designed to resist earthquake damage. However, there is considerably more information on the affects of earthquakes on buildings and standards have changed since the construction of the City Government Building. The City is now evaluating the building to determine if improvements are needed.

The Alameda County Library was designed to more current standards for resisting seismic activity. Future buildings in the Civic Center complex will require similar geotechnical and seismic safety study prior to construction. The south wing of the Central Park Community Center was found to be located on a trace of the Hayward fault and has been closed to public use due to structural damage and ground rupture.

Existing Structural Hazards Related to Seismic Activity

The majority of homes and buildings in Fremont are single-story, post-1950 wood frame structures which tend to fare well during earthquakes due to the flexibility of the building material, extensive bracing, and low elevation design. The relatively inflexible portions of buildings such as chimneys, porches, stucco, gas and electric lines, are all susceptible to damage in the event of moderate shaking during a quake.

Unreinforced masonry, stone, brick or block buildings are the most failure prone structures found in urban areas. In 1986, the State required cities to inventory potentially hazardous masonry buildings and develop and implement a mitigation program to reduce potential hazards. The preliminary survey was conducted in July 1989 and estimated approximately 30-35 unreinforced masonry commercial or industrial buildings exist in the City. The majority of these were built in the early 1900s to 1940s, and are located in the older areas of Fremont such as the Irvington, Niles and Centerville Districts. Building owners were notified of the hazard. The State and City have not mandated structural strengthening of these buildings.

Buildings built before 1974 with concrete tilt-up walls and unreinforced concrete frames can often be damaged from ground shaking during an earthquake if proper precautions are not taken. Fremont has some pre-1974 tilt-up structures in the Central Business District, Central Area, and Industrial

areas of the City. Mobilehomes and structures not properly tied to foundations also tend to experience more than usual earthquake damage.

While it is impossible to guarantee the safety of any structure, a clearly defined and conscientiously enforced program of structural reinforcement greatly reduces the risk of injury and loss of life due to structural failure.

Transportation Routes

The Hayward fault is crossed by a number of local and region serving transportation routes. Many of these crossings are at grade and on level ground; therefore, while pavement and road bed might be damaged by ground rupture and displacement, a street or road could remain passable.

Crossings involving elevated structures, trackage or grade separations, such as freeway overpasses, would be affected more seriously by fault slippage or rupture. Existing facilities which might have to be closed because of fault activity are the Southern Pacific and Western Pacific railroad tracks at Shinn and near Union Street in Irvington, and the corridors through Niles Canyon. Major highway crossings on I-680, from the Alameda County-Santa Clara County boundary line north to the Washington Boulevard overcrossing in Fremont, are susceptible to significant damage in a major quake on the Hayward fault.

The BART system was designed to reduce the affect of seismic hazards, as shown by its ability to withstand the shaking of the Loma Prieta earthquake. However, the system crosses structurally poor soils and track distortion can be expected by even a moderately intense earthquake. If BART is extended to the south to the Warm Springs area, BART tracks would cross Walnut Avenue directly over the active Hayward fault trace. A grade separated intersection of Washington Boulevard and Driscoll Road also would be very near or on the Hayward fault.

Utility Systems

Most utility systems in the City have been built to respond to possible fault displacement. With the exception of sewer mains, the utility and pipeline systems in the Fremont area have valves to control or shut-off flows near the points of intersection with the Hayward fault. For example, the Hetch-Hetchy system was built with expansion joints where it crosses the Hayward fault. However, none of the pipeline systems crossing the fault in Fremont have been subjected to lateral offsets of more than several inches. It is not known whether any of these would withstand an offset of three feet, the amount reported following the 1868 Hayward fault quake. Soil liquefaction and ground subsidence, a secondary effect of seismic activity, could severely cripple some of these systems. The sewage treatment plant operated by the Union Sanitary District is located in an area of moderate to high liquefaction potential, as are the mains serving the plant. Figure 10-5, Pipelines and Utility Systems, shows the aqueducts, powerlines and other main utilities.

FREMONT GENERAL PLAN

HEALTH AND SAFETY SECTION

PIPELINES AND UTILITY SYSTEMS

LEGEND

- HETCH HETCHY / SOUTH BAY AQUEDUCTS
- PACIFIC GAS & ELECTRIC POWER LINES
- PACIFIC GAS & ELECTRIC GAS LINES
- WATER MAINS 16" OR LARGER (EXCEPTIONS ON MISSION & MILES BLVD)
- RESERVOIR
- WATER TREATMENT PLANT
- WATER STORAGE TANKS OR WELLS
- UNION SANITARY DISTRICT SEWER MAINS
- PACIFIC TELEPHONE & TELEGRAPH
- PTT TRANSMISSION FACILITIES
- SOUTHERN PACIFIC CO. PIPELINE SHELL OIL PIPELINE
- SEWAGE TREATMENT PLANT
- PACIFIC GAS & ELECTRIC SUBSTATIONS

- CITY OF FREMONT BOUNDARY
- SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

0 2000 4000

NORTH

BASE MAP DATE MAY, 1989

SOURCE WOODWARD CLYDE CONSULTANTS 1976

UPDATE EP ASSOCIATES AUGUST 1990

Figure 10-5

San Andreas Fault

Studies of the frequency and intensity of earthquakes on the major fault system traversing the Bay Area suggest a pattern of recurrence. Geologists and seismologists generally concur that a major quake will occur on the San Andreas system on the average of once every 50 years, with such a quake (magnitude 8 or higher) likely to occur on the Bay Area segment of the fault on the average of once every 100 years. The October 1989 earthquake was not considered by seismologists to be of sufficient magnitude to alleviate the probability of another even more destructive quake occurring. As indicated by the records of the 1906 San Francisco earthquake, any major quake on the San Andreas system in the Bay Area region will cause severe shaking in Fremont.

Hayward Fault

Recurrence intervals for earthquakes on the Hayward fault are more difficult to predict than those for the San Andreas fault. Over the past few years geologists have revised predictions to suggest an increase in the probability of an earthquake on the Hayward fault. Recent data gathered by the U.S. Geological Survey suggests a 36 to 50 percent probability of a 7.5 (Richter Scale) earthquake on this fault over the next 30 years.

Calaveras Fault

Movement on the Calaveras fault is expected to have less impact on Fremont than the other two faults. The Calaveras fault is considered to be less active than the Hayward fault in the general vicinity of Fremont and, therefore, less likely to generate a major earthquake in this area. However, based on past occurrences, an earthquake of 7.0 (Richter Scale) on the Calaveras fault could be expected to cause ground distortion along traces of the Hayward fault, as well as intense shaking. The effects of such an earthquake would be similar to those of the 1868 Hayward earthquake (Richter Scale 6.8), including surface rupture of several feet northeast of Fremont in the Sunol Valley area.

Combined Probability

Although the potential for damage from earthquakes generally decrease as the distance from the epicenter increases, a major earthquake on any of the faults in the region has the potential to cause damage throughout the Bay Area. Recent (1990) studies by the United States Geological Service estimate a 67 percent combined probability of one or more large earthquakes of 7.0 magnitude (Richter Scale) occurring in the San Francisco Bay Region in the next 30 years.

Projected Impacts of Seismic Events

It is not possible to predict the level or extent of damage in the event of an earthquake. However, some types of damage can be anticipated. In residential areas, chimneys, porches and stucco may be damaged by moderate shaking during a quake. Older wood-frame structures weakened by rot or termite infestation may break away from their footings, rupturing utility connections. Mobilehomes and structures not properly tied to foundations may also slip from foundations.

In commercial and industrial areas, a severe earthquake could lead to significant damage or collapse of unreinforced masonry, stone, brick or block buildings. Buildings built before 1974 with tilt-up walls and unreinforced concrete frames could also collapse.

Earthquakes have secondary impacts. One of the more serious secondary impacts would be fires resulting from ruptured electric and gas connections, collapsed chimneys and other damage. Addressing fires is complicated by the possibility of breaks in the water distribution system reducing or eliminating supply and water pressure. Fires and impassable roads would also severely complicate emergency response.

Any road closures would limit evacuation routes and timely response to emergencies. A severe quake would lead to the closure of BART and most rail lines in the City. However, most surface roads are expected to remain passable. Of the major highways, I-680 is the most susceptible to significant damage leading to closure. Eastern portions of the City's hills and Niles Canyon might be isolated by road closures due to slides and other damage.

As noted above, most utility systems in the City have been built to withstand fault displacement. However, in the event of a severe quake, most or all utility systems could be inoperable for several days.

FLOOD HAZARDS

Historically, the occurrence of flooding has been a benefit to agricultural soil, wildlife, and the general ecological balance of the community. Flooding becomes a hazard when the flow of water threatens life and damages property. Damages from flooding increase in proportion to the growth of urban development and as subdivisions locate on potential flood sites.

The primary causes of flooding are: 1) excessive surface runoff resulting from intense or heavy rainfall; 2) extremely high tides; and, 3) the failure of flood control or water supply structures such as levees or reservoirs.

When prolonged rainfall exceeds the absorption rate of the soil or the water storage capacity of the watershed, the excess must flow downstream. Although it is not possible to prevent the excessive rainfall which causes major floods, it is possible to manage areas subject to flooding for the

protection of life and property. Through the use of hydrologic data in conjunction with regulatory and flood proofing measures, proper land use planning can be effective in the control of flooding and its potential adverse effects. This section describes conditions in Fremont related to flooding, and the actions taken to control it.

Setting

Historically, Alameda Creek has been the major source of freshwater flooding in Fremont. Beginning in 1962, various projects have reduced the threat of flooding, including channelization of Alameda Creek. The channel has a holding capacity in excess of what is required to hold a flood that is estimated to occur once every 100 years (a "100-year flood").

Other flood hazards in the Fremont area have been significantly reduced through projects of the Alameda County Flood Control and Water Conservation District and the U.S. Army Corps of Engineers (see Public Facilities Chapter for a discussion of the District). The Flood Control District facilities, which include various types of channel improvements for the eight smaller creeks and drainways that flow out of the hills and across the Bay plain, are designed to handle flooding up to and including the 50-year flood (i.e., a flood that can be expected to occur once in 50 years). The District is currently working on improvements needed to protect developed areas from 100-year floods.

Because most flood control channels have been constructed to withstand the 50-year flood, some areas of the City are still prone to flooding. These areas are discussed in the following section (see Inundation Hazards Map, Figure 10-6).

Regulations Related to Flooding

The City is a participant in the National Flood Insurance Program operated by the Federal Insurance Administration of the Department of Housing and Urban Development. In addition to insuring property owners against losses due to flooding, the program requires local governments to control development in a manner which minimizes the risk of flood damage.

Maps of 100-year flood inundation areas developed for the Insurance Program show the boundaries of the 100-year and 500-year floods. The 100-year flood has been adopted by Federal Emergency Management Agency (FEMA), and is used by the City of Fremont, as the base flood for the purposes of floodplain management.

Fremont ordinances regulate development which would reduce the water-carrying capacities of watercourses. Hillside development is analyzed for its impact on downstream drainage. Designated areas including ponds and wetlands are reserved for use as storm water holding facilities where runoff

can be directed during peak flow to reduce flooding downstream. Development plans are routed to the Alameda County Flood Control and Conservation District for comments as to impacts on the flood control systems and facilities.

Fremont ordinances also control development in areas prone to flooding. All construction in these areas must be raised to an elevation of 1.25 feet above the 100-year flood zone as defined for that location. An area may be removed from the 100-year flood zone and its regulations if levees and other flood control projects are constructed and are sufficient for protection in the event of a 100-year flood.

Flood Prone Areas

Flooding in excess of the 100-year flood will cause some inundation of low-lying flatland areas of the City. Figure 10-6, Inundation Hazards Map shows the areas which are expected to be affected during a 100-year flood. Most of the areas prone to historical flooding are located in the western portions of the City and have been designated primarily for permanent open space uses such as salt evaporators, salt marsh, or parks. A 100-year or greater flood would extend roughly one-half mile inland from the Coyote Hills covering land designated for agricultural use. Flooding from a 100-year or greater flood would affect portions of the Northern Plain planning area, and portions of the City's industrial area west of I-880, south of Warren Avenue.

Other areas of the City where inundation from a 100-year flood is projected include the narrow Alameda Creek floodplain in Niles Canyon; the area surrounding Lake Elizabeth, extending into the Mission Valley subdivision; Olive Avenue and vicinity east of I-680; the Crandall Creek area west of Interstate 880; the southeast end of the former Skysailing Airport and Fremont Raceway; and the KGO radio transmitter. There continues to be localized flooding problems along the urban fringe near the base of the hills and in scattered flat land areas.

FREMONT GENERAL PLAN

HEALTH AND SAFETY SECTION

INUNDATION HAZARD MAP

LEGEND

- AREA SUBJECT TO INUNDATION BY 100-YEAR FLOOD
- CHANNEL SUBJECT TO 100-YEAR FLOOD
- AREA SUBJECT TO 100-YEAR TSUNAMI AND STORM WAVE ACTION
- LIMIT OF WORST CASE INUNDATION FROM DAM FAILURE (LAKE DEL VALLE)
- ARRIVAL TIME OF DAM FAILURE FLOOD WATERS
- (R) ALAMEDA COUNTY WATER DISTRICT RESERVOIR OR TANK (APPROXIMATE LOCATION)

- CITY OF FREMONT BOUNDARY
- SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

0 2000 4000

NORTH

BASE MAP DATE: MAY, 1989

INUNDATION HAZARD DATA: AUGUST 1990

FIGURE 10-6

Flooding Related to Earthquakes, Dam (Inundation Areas) or Tank Failure

Flooding could accompany an earthquake under the following conditions: a dam or storage tank fails; the earthquake creates severe groundshaking resulting in a wave or seiche in a reservoir and causing a dam to fail or overflow the surrounding area; a stream is dammed by a landslide and water volume exceeds channel capacity; or an earthquake-triggered landslide into a reservoir creates an overflow. Channels and water courses with earthen banks and levees are particularly vulnerable and could collapse in a major earthquake resulting in partial or complete blockage of channels causing flooding upstream of the impoundment. Lift stations and tidegates could be damaged and shoreline levees collapse, eliminating or impairing the control capabilities of the system. Levees are especially susceptible to rapid settlement due to liquefaction or horizontal spreading of underlying soils.

Damaging seiches generated by seismic activity would not be produced by the small, shallow lakes and ponds in the Fremont area. The danger to Fremont from seiches would be from the overtopping or failure of dams at the large reservoirs in the Sunol area which could produce flooding through Niles Canyon.

Dam failures are one of the greatest threats to life and property of all natural disasters because of the large populations typically exposed to danger. Failure of a dam on Alameda Creek or on a tributary to the creek could release a large volume of water into Niles Canyon, exposing the population of Fremont, Newark and Union City to a major hazard, and destroying property and essential public facilities. While dam failure is highly unlikely, the dams on the Del Valle and San Antonio Reservoirs are more serious threats than the dam on the Calaveras Reservoir which has recently been strengthened. Dams are regularly inspected by the California Division of Safety of Dams, and response plans prepared by the division in the event of inundation (see the Health and Safety Chapter Background Report for inundation maps).

It would take an estimated ninety minutes (for the Turner Dam on the San Antonio Reservoir) to 160 minutes (for Del Valle) for flood waters to reach the mouth of Niles Canyon where it could spread into populated areas. Flood hazards would be most severe in winter, when streams and reservoirs are full.

The failure of water storage tanks releasing a large volume of water over down-slope areas is a local land use planning concern. The Alameda County Water District has two water storage tanks and five reservoirs located on the lower slopes of the eastern Hill Face. Additionally, there are scattered ponds in the hill area. Should one tank fail or pond overflow, there is the possibility that a large volume of water could suddenly be released over downslope areas. Most water tanks and reservoirs are located in areas away from residential development, so the released water would pond on flatland.

Tsunamis

Tsunamis or seismic sea waves (commonly called "tidal waves") are waves generated in bodies of water by earthquake shaking, underwater earth slides, subsidence or uplifting, or slides into reservoirs, lakes or bays. Tsunamis generated by Pacific rim earthquakes have not produced damaging waves on the shoreline of the South Bay despite runups of 7-10 feet at the Golden Gate. USGS has predicted the areas of the San Francisco Bay Region most likely to be inundated by waves are marshlands, tidal flats, and former bay margin lands not artificially filled but still at or below sea level. Based on this information, tsunami hazards would be limited to the approach to the Dumbarton Bridge (most of the bridge is now elevated above the flood inundation line) and the shoreline area almost entirely within the National Wildlife Refuge and designated for permanent open space uses. Inundation in the area of Mowry slough would affect the Hetch-Hetchy aqueduct and Southern Pacific Railroad track crossing the Bay from Dumbarton Point to East Palo Alto. Tsunamis do not create a hazard or risk in the developed area of Fremont.

Projections

Most of the urbanized areas of the City are now outside the 100-year flood zone. For those areas within the flood zone the Flood Control District is continuing to make improvements to increase protection. Industrial zoned areas near the Baylands in western Fremont can be expected to be protected from flooding through projects constructed as part of new development.

Flooding, dam failures, tsunamis and other natural disasters cannot be predicted. The City's development ordinances are oriented toward minimizing the damage when a disaster occurs. Its emergency planning addresses the need to plan for the needs of residents affected by such disasters including evacuation plans and provision of adequate warning, when feasible. These plans are discussed in the Emergency Preparedness section of this Chapter.

As more hillside land in eastern Fremont is proposed for development, consideration must be given to the potential impacts of water storage tank failure on existing and proposed development.

FIRE HAZARDS AND EMERGENCY RESPONSE

The City's Fire Department is not only called on to fight fires, but is often the first agency called in the event of a medical or other emergency. As a result, the role and function of the Fire Department has broadened beyond its traditional role of fighting fires to include response to other types of emergencies, including those related to medical and hazardous materials. Over the past 5 years, fire has accounted for approximately 9% of the calls to the Fire Department. This includes buildings, vehicles, grass, and all other

types of fires. About 60% of the calls were for other emergencies and the remaining 31% were for citizen assistance.

This section discusses the City's current efforts to minimize risk from fire and to respond to fires and other types of emergencies when they occur. The role of the Fire Department in regards to hazardous materials is summarized in this section; however, the overall response of the City to hazardous materials is discussed in the "Hazardous Materials" section of this Chapter.

Setting

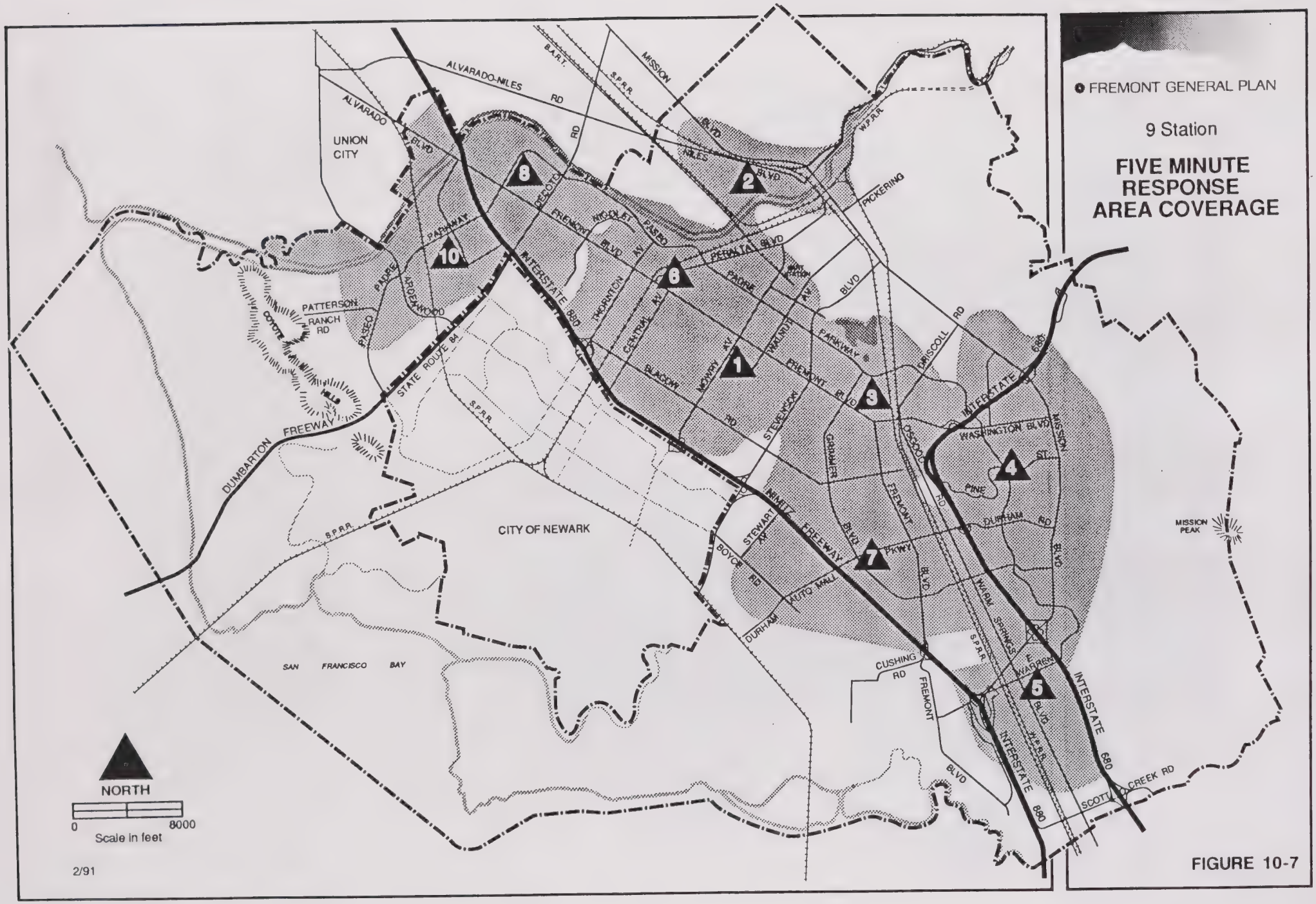
Emergency Response

When emergencies occur the City seeks to ensure there is adequate and timely response. Because quick emergency response is critical in fire suppression and other emergencies, the City Council established a goal of a five minute response for 95 percent of all emergency calls. The five minute response goal is based on the rate fire spreads and the length of time a non breathing person can survive. A fire will square itself every minute it is allowed to burn. The length of time a non breathing person can survive without oxygenated blood being delivered to the brain is five minutes. Response time includes receipt of alarm, dispatch of engine or ladder truck, and response time.

In 1985, the City Council adopted a plan for improving fire and emergency response service. The plan called for expansion of the City's then existing 8 station to 11 stations as well as other improvements. By the end of 1990, the City had re-located Engine 4 and added Engine 10. Another, Engine 9, is scheduled to open in the fall of 1991 bringing the total number of stations to 10. The areas within a five minute response time (1990) are shown in Figure 10-7. The Fire Department estimates that in 1989 it met the five minute goal 70 percent of the time for most of the City. In areas remote from station locations, the Department met this goal 50 percent of the time. It expects the recently completed and proposed stations will significantly improve its response time percentage for most areas within the City.

Fire Prevention

All proposed development projects in the City are reviewed to ensure appropriate measures are taken to minimize risk from fire. Projects are reviewed for adequacy of access, design features (setbacks and clearance between buildings), and compliance with code requirements. Access is particularly important to ensure fire and other emergency apparatus can reach fires, and people can escape in the event of an emergency. Provision of alternate access routes to developed areas is an important principle and is becoming more important as Fremont's hilly areas are developed.


FREMONT GENERAL PLAN
9 Station
FIVE MINUTE RESPONSE AREA COVERAGE
UNION CITY
CITY OF NEWARK
SAN FRANCISCO BAY
ALVARADO-NILES RD
ALVARADO BLVD
DESOTO RD
FREMONT BLVD
MOWRY AV
STATE ROUTE 84
DUMBARTON FREEWAY
INTERSTATE 880
NIMITZ FREEWAY
INTERSTATE 680
PERALTA BLVD
PATTERSON RANCH RD
PASEO PADRE PARKWAY
WASHINGTON BLVD
DURHAM RD
CUSHING RD
SCOTT CREEK RD
MISSION PEAK
NORTH
0
8000
Scale in feet
2/91
FIGURE 10-7

Buildings 70 feet (approximately seven stories) or more in height are considered high rise under the Uniform Building Code (UBC). Sprinklers and other safety features are required in these buildings. Sprinklers are also required in all buildings over 5000 square feet, where more than 50 people may assemble regardless of the activity or the number of floors, and in locations beyond five minutes response time (mostly in the hills). Proposals to create view lots tends to move more people into the critical fire area. All hospitals are required to have sprinkler systems. Some buildings containing hazardous materials may be required to have sprinkler systems depending on the quantity and characteristics of the hazardous materials regardless of the number of square feet or number of floors.

Despite continuing improvements in response and equipment, some areas and types of buildings present special risks and problems in fire prevention and emergency response. These are described below.

High rise and High Intensity Buildings

High rise buildings present special problems of access and emergency exit during fires or other emergencies. Moving fire fighters and equipment up stairways to the upper stories increases response time and delays emergency access. To reduce the risk of death or injury related to fire in a high rise building, built-in protection such as early warning and detection systems, automatic sprinklers, fire resistive materials and appropriate design of structures is required.

Higher density residential and commercial development presents some increased fire risk due to the intensity of use and greater chance of fire spreading from one living unit or business to another. When high density residential or commercial development is proposed the Fire Department reviews development plans for adequacy of water supply, noncombustible roofing, one-hour rated exterior walls, adequacy of exits and entrances, fire lanes (if required), and sufficient clearance between structures.

Industrial Fires and Hazardous Material Release

Industrial fires and hazardous material releases present special hazards, both to the firefighter and the community. Industrial fires may include hazardous substances, and the fire may spread the hazardous material into the environment, endangering other areas in the community. The City has a Hazardous Materials Response Team specially trained to make a preliminary assessment of the type of material involved in an emergency. Additionally, one fire engine has specialized apparatus and equipment necessary for hazardous material incident response.

The City maintains records of the type of hazardous materials used and stored in the City. Users are required to comply with the Hazardous Materials Ordinance and permitting process. Of particular concern are those facilities which use extremely hazardous materials in production processes. Fires, explosions or releases of hazardous materials could block streets,

damage adjacent properties and require evacuation of the surrounding population (see below, Hazardous Materials, for further discussion).

Rail and highway transport of hazardous materials also present risks to the community due to accidents. The City has limited jurisdiction over the transport of these materials in regard to the designation of roads where they can be transported. The City cannot control rail-lines or State highways and freeways where the State has authority.

Residential Areas

Several residential areas, and especially recently developed areas, are outside of where the City can currently meet its five minute response goal. However, planned improvements to fire service will correct this situation for most residential areas. Residential areas where this goal will not be achieved after improvements are made is discussed under "Projections."

Hill Development

Residential development in the hills present special risks due to the proximity of undeveloped land where fires can easily spread and the time it takes for the Fire Department to respond in these areas. For these areas the City has special development requirements to minimize the risk of fire, including provision of adequate water supply, noncombustible roofing, one-hour rated exterior walls, irrigated greenbelt barriers, firebreaks, sufficient clearance between structures, and drought and fire-resistant irrigated landscaping. Fire roads and firebreaks must also be provided.

Regions above and below the "Toe of the Hill" (see Land Use Chapter for definition) present problems due to the dry, windy climatic conditions in addition to the rugged terrain and highly flammable native brush. These areas are particularly susceptible to wildfire, an uncontrollable brush fire fueled by this vegetation. The scattered existing homes in this area are generally outside the five minute response time of the City. Limited accessibility for emergency equipment could complicate emergency response and evacuation. The low density of housing in area limits the number of people and structures that could potentially contribute to the problem.

Generally, all of the area east of Mission Boulevard is designated a Critical Fire Area by the Fire Department from May through October.

Peakload Water Requirements

The peakload water requirement, or required water supply needed for fire protection, is closely related to land use. The quantity of water needed to fight a fire varies depending on the type of development, degree of fire hazard, and building occupancy. Peakload water requirements vary from 1,500 gallons per minute (gpm) for low density residential areas, up to 12,000 gpm in commercial and industrial areas.

A minimum residual pressure of 20 pounds per square inch (psi) should remain in the system while the required gallons per minute are flowing. This requires fire hydrants which meet the standards established by the Alameda County Water District and the City, and also, adequately sized water mains.

The Insurance Service Organization rates all cities for their emergency response capabilities and the availability of peak-load water to fight fires. The rating affects insurance costs for private property owners. The rating ranges from 1 (highest rating) to 9 (lowest). Fremont has received a rating of three. The Alameda County Water District periodically runs fire flow tests in the City to verify that water pressure is maintained. If tests show pressure is substandard, improvement of the water system becomes a requirement for water service to the proposed development or building.

Some portions of Niles currently do not conform to the minimal residual water flow at 20 psi because of inadequately sized water mains. Niles Blvd. for this reason has recently been designated as a Hazardous Fire Area. New construction will be required to meet special construction standards to deal with the increased hazard. New development in the hill areas is also required to meet fire department standards and conditions including improved water service and special design features discussed previously.

Minimum Road Widths

Emergency equipment must be able to reach a site of an emergency and people in an area must be able to escape from danger. Roads must have sufficient width to allow fire and other emergency equipment to pass. To ensure sufficient access in the event of emergencies, Fremont requires two ingress-egress roads in developments that can accommodate fire and other emergency vehicles when 80 or more dwelling units are served. Requirements have been established for minimum road width and overhead clearance, for all emergency access roads. The minimum road width for public streets varies depending on type of road (see Transportation Chapter for more detail). The narrowest public roads are cul-de-sac streets which must be at least 32 feet wide. Private roadways must generally be at least 28 feet wide in areas where development is less than 4 stories, and 36 feet where development is greater than 4 stories. Emergency access roads without auto traffic must be 20 feet wide and 28 feet wide where there are fire hydrants.

Overhead clearance, turning radii and turnaround areas are also regulated to insure emergency vehicle access. Emergency access roads must have at least 13 feet 6 inches of overhead clearance. The minimum required outside turning radius varies depending on planned use. Emergency access roads designed to accommodate an Engine Company must have a minimum outside radius of 38 feet and inside turning radius of 20 feet. Emergency access roads designed to accommodate a Ladder Company must have a minimum outside turning radius of 50 feet and inside turning radius of 30 feet. Fire lanes, emergency access roads, dead end streets and alleys must end in a cul-de-sac or other approved turning area.

Emergency Response

The City's Fire Department also responds to medical emergencies. Medical emergencies are by far the most common type of emergency call. Of emergency calls received by the Fire Department in 1990, 58% were for medical emergencies. The Fire Department is responsible for providing emergency pre-hospital care throughout the City. All members of engine and ladder companies are certified emergency medical technicians and at least one member of each engine company is a paramedic.

Emergency Training

Quick and adequate emergency response requires a well trained Fire Department. Training activities are conducted for all emergency functions of the Fire Department. The Fire Department routinely conducts training activities including fire suppression, rescue services and medical emergencies, inspection and fire prevention planning.

Projections

Fire Prevention and Response Time

In addition to the existing 9 Fire Stations and the one under development, other improvements are proposed for the System. Other proposed improvements include the following:

- a new station located west of the freeway in the Industrial Area
- relocation of one existing Fire Station
- reconstruction of one Fire Station.

Although response time will be improved with the additional stations, there are still areas of the City which will be outside the 5 minute time area. These are shown in Figure 10-8. There is an ongoing evaluation of fire response needs throughout the City.

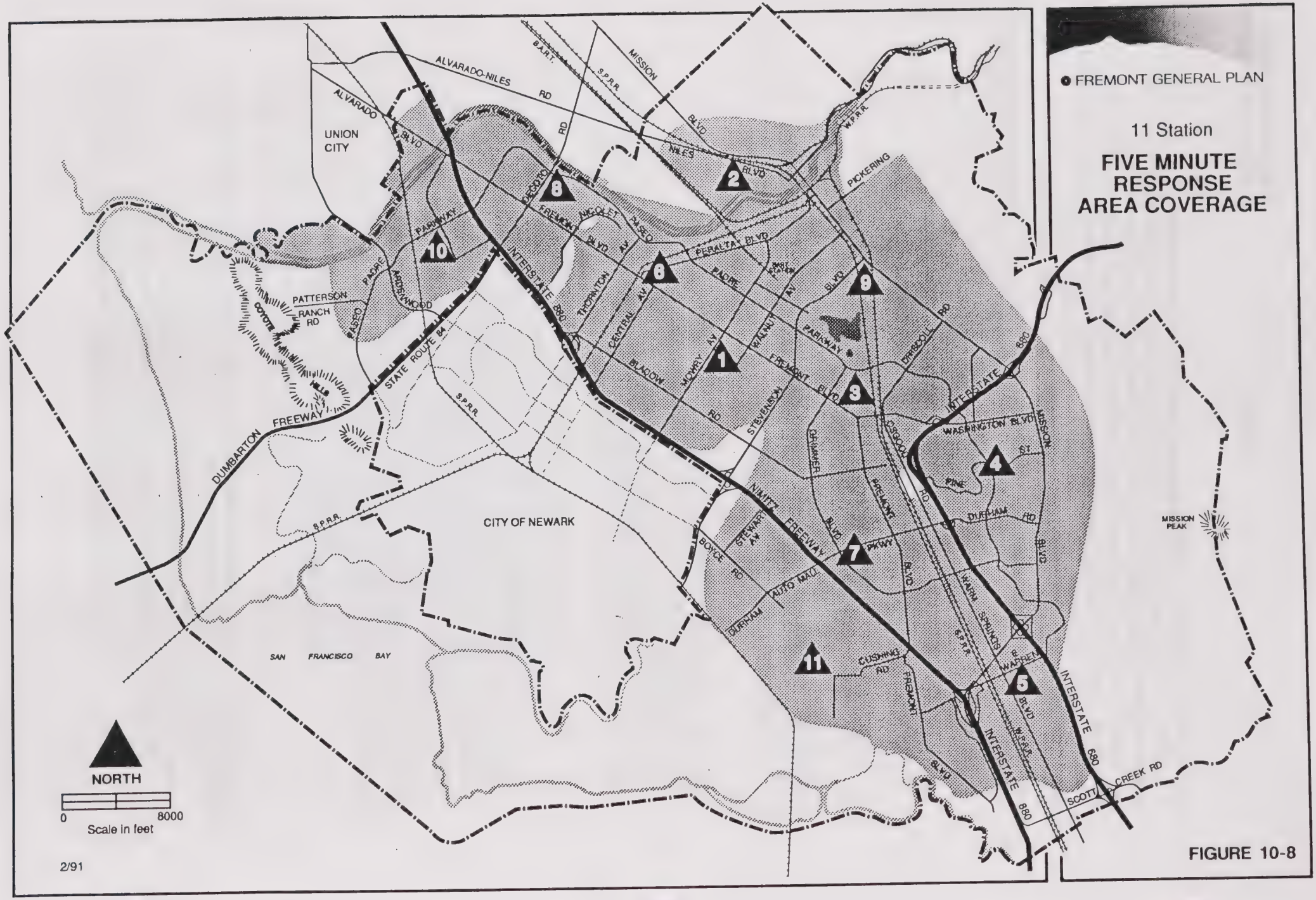

FREMONT GENERAL PLAN
11 Station
FIVE MINUTE RESPONSE AREA COVERAGE
UNION CITY
CITY OF NEWARK
SAN FRANCISCO BAY
ALVARADO-NILES RD
ALVARADO BLVD
MISSION BLVD
NILES BLVD
B.A.R.T.
S.P.R.R.
W.P.R.R.
DECOTO RD
FREMONT BLVD
NICOLET AV
PASEO PADRE PARKWAY
PERALTA BLVD
THORNTON AV
CENTRAL AV
BLACOW RD
MOWRY AV
WALNUT AV
STEVENSON BLVD
PARKWAY
DRIVECOLL RD
INTERSTATE 880
INTERSTATE 680
WASHINGTON BLVD
MISSION ST.
PINE
DURHAM RD
BLVD
WARM SPRINGS BLVD
CUSHING RD
FREMONT BLVD
SCOTT CREEK RD
MISSION PEAK
PICKERING
PATTERSON RANCH RD
ARDENWOOD BLVD
STATE ROUTE 84
DUMBARTON FREEWAY
NIMITZ FREEWAY
BOYCE RD
STEWART AV
AUTO MALL
DURHAM
CHAMPER
CSCHOOL RD
FREMONT BLVD
1
2
3
4
5
6
7
8
9
10
11
NORTH
0
8000
Scale in feet
2/91

FIGURE 10-8

High Rise and High Intensity Buildings

As development proceeds in the City there is likely to be additional construction of taller buildings, especially in the Central Business District area. Higher densities can also be expected. Project review to assess compliance with regulations and standards will continue to be especially important with high rise and high density commercial or residential development.

Industrial Fires and Hazardous Material Release

Industrial growth may increase the risk related to fires involving hazardous materials. Many industries use hazardous and flammable chemicals. A new fire station planned in the southern Industrial Area of Fremont west of the Nimitz Freeway (I-880) should help to provide improved service and response for this area. Additionally, large industrial complexes are often required by the City to have their own highly trained team of hazardous materials personnel and equipment to reduce the risk to employees and property (see discussion under Hazardous Materials, below).

Residential Areas

Additional development along the base of Fremont's eastern hills expected over the next few years. Most of these areas are within the expected five minute response time for the City, but face special hazards due to their relative isolation and proximity to open brush and grassland. The City's current fire prevention standards for developments will reduce the fire risk in these areas.

Development above the Toe of the Hill is controlled by the provisions of the Hill Area initiative. Without the availability of urban services, development is limited to one unit per 20 acres. As discussed in the Land Use Chapter, this Plan identifies a process for evaluating the benefits and costs of providing urban services and allowing for increased development east of the Hill Face. One of the issues to be assessed is the impact on fire service. If development is recommended, then a Specific Plan will be prepared which will address, among other issues, how best to provide fire service to this area.

HAZARDOUS MATERIALS AND WASTE

The management of hazardous materials has been an increasingly important consideration in land use planning over the last decade due to a growing community awareness of the threat they pose to a community. Accidental release of hazardous materials into the atmosphere or onto the ground during a fire, earthquake, traffic accident or other disaster could threaten the health and safety of workers and of nearby residents. During a major disaster, such materials could spill onto adjacent properties or clouds of toxic

gas could spread through large areas of the City. All levels of government have become increasingly active in regulating the storage, use and transport of these materials. The City's efforts are discussed below.

Setting

Fremont has experienced rapid industrial growth in recent years. Much of this growth has been in high technology industries, many of which use hazardous materials. With the increase in quantity and hazard of regulated substances, the potential risks to the community have increased. While hazardous substances pose a potential threat for any part of the City, residential areas in closest proximity to an industrial area face an increased risk of exposure during an accidental release of a toxic substance, spill or fire.

The transport of materials within and through the City poses a widespread threat, since accidents could occur on any of the City's transportation corridors, posing a risk to adjacent neighborhoods and businesses.

In addition to managing routine use of hazardous substances, the City must also seek to ensure the clean-up of contaminated areas where those substances have been used, stored or disposed of in the past.

The use, control and management of hazardous materials are discussed below, as well as the City's plan to respond to an emergency resulting from an accidental release of a hazardous material into the environment.

Areas of Hazardous Materials Use

Over 1,600 identified businesses require regulation under the City's Hazardous Materials ordinances. Most hazardous materials use occurs in the industrial areas of the City. Increases in the volume and changes in the character of such materials can be expected due to new industrial and commercial development.

Residential areas closest to major industrial development areas are at the greatest risk of being affected by an accidental release of hazardous substances. Some neighborhoods in the Warm Springs and Northern Plains Planning Area, as well as some neighborhoods in the city of Newark are close to industrial areas. In addition, hazardous materials are also found near residential areas in smaller industrial areas in Niles and Centerville.

Transportation of Hazardous Materials and Waste

An accidental spill of a hazardous material can occur almost anywhere in the City, endangering life and property and/or temporarily closing a major transportation arterial. The City only has jurisdiction over what is transported on City streets within the City limits. The State controls the freeways, highways and railroads. The main highway routes for hazardous

materials through Fremont are Interstate 880 and 680. Interstate 880 is considered the primary transport route for much of the hazardous waste produced in Alameda County.

Federal, State and local laws and regulations on transport of hazardous materials assign specific duties and responsibilities to the producers, transporters and receivers of hazardous substances. These regulations also define the responsibilities of the various governmental agencies for regulating and monitoring the transport of the material or waste, and for emergency response to spills in transit. Should a spill occur on one of the State highways through the City, the City's Fire Department would respond initially with the clean-up operation usually the responsibility of CALTRANS or the Coast Guard.

A major concern to the City when a hazardous chemical spill occurs is the possibility of surface and groundwater contamination. Floodplains and creeks lie in close proximity to some primary transportation routes and can become contaminated quickly between the time a spill occurs and the clean-up process begins. Because of the importance of Alameda Creek for the City's water supply, most vehicles carrying hazardous materials are banned through Niles Canyon on Route 84. However, the railroad which also runs through this area is still permitted to transport such materials.

Hazardous Material Management

Regulation and management of hazardous materials are administered by the City of Fremont, County, State, and Federal agencies and non-governmental organizations. Numerous regulatory requirements govern hazardous materials and wastes in water, land and air, and some regulations overlap.

The City regulates the management, handling and storage of hazardous materials. Fremont controls the underground storage of hazardous materials, establishes permitting procedures, responsibility for enforcement and compliance scheduling. This issue is critical in Fremont where leakage of hazardous substances from underground tanks could contaminate the aquifer underlying the City which supplies the City's drinking water. (See the Water Resources Section of the Natural Resources Chapter for more discussion on leaking underground tanks as they relate to groundwater.)

Hazardous Material Emergency Response

The State Health and Safety Code requires the City to adopt a Hazardous Material Area Plan for Emergency Response. This plan is for emergency preparedness in the event of a disaster related to hazardous material use, storage or movement. The Fremont City Council adopted a plan in January 1987 (subsequently amended) and it has been approved by the State Office of Emergency Services.

The plan sets forth responsibilities within City government for responding to a hazardous materials emergency. The plan also includes a detailed checklist for actions, training programs, procedures for requesting State and Federal funding assistance and incident reporting procedures. Also included in the plan are maps showing where significant quantities of hazardous materials are stored, evacuation routes from the facilities, and the location of sensitive receptors such as schools, hospitals, and nursing homes.

The Hazardous Material Area Plan for Emergency Response provides a more detailed description of response actions in the event of a hazardous materials emergency than the City's Emergency Plan (discussed in the next section).

Hazardous Waste Management Plan

Every city and county is required by State law to adopt a Hazardous Waste Management Plan. If the county plan is applicable and contains sufficient detail for the city's use, a city may adopt the county plan. Alameda County's plan, prepared in 1989, identified general areas throughout the County, based on siting and environmental criteria, which are considered appropriate for the siting of new offsite hazardous waste transfer, storage, or disposal facilities. Several possible sites in the City may meet the Plan's criteria as potential treatment, storage, or disposal facilities for hazardous wastes. No specific sites in Fremont have been identified.

The City Council adopted the County plan by resolution on July 25, 1989. The County plan is still under review at the State level and may require revision. After State approval, a General Plan amendment and zoning ordinance revision will be necessary to ensure conformance with the plan. The City is also required to adopt a hazardous waste minimization plan.

Site Analysis and Clean-up

Prior to the acceptance of a development project application, the applicant must verify the site does not have any significant environmental contamination and that it is not listed on the current Hazardous Waste and Substances Sites List published by the Governor's Office of Planning and Research.

Projections

Areas of Hazardous Materials Use

High-tech manufacturing often uses hazardous materials or produces hazardous wastes. A significant increase in industrial uses is expected in Fremont, and especially by high-tech oriented industries, leading to a proportional increase in the use of hazardous materials. Continued monitoring, management and enforcement of existing regulations will be

required to reduce the risks posed by industrial growth. In addition, as the City's residential land supply has developed, pressure has grown to permit residential development in areas formerly planned for industrial uses. If residential development is to occur near industrial areas a complete environmental and hazardous material assessment will be necessary.

Transportation of Hazardous Materials and Waste

An increase in industrial development also implies an increase in the amount of hazardous substances transported within the City. The City should periodically review its truck routes and other controls over the transport of hazardous materials to minimize risk to the community from any accidental spill.

Hazardous Materials Regulation and Emergency Response

The City's management and emergency response plans for hazardous materials are approved by the State. In the future, maintenance of the plan, appropriate training and periodic review and updating of the plan will ensure the City is up-to-date in its management of hazardous materials and in its response to emergencies.

EMERGENCY PREPAREDNESS

Effective safety planning involves both the development of regulations to prevent and/or reduce hazards, and the preparation of plans to deal with emergencies should they arise. While prevention is the most effective method of protecting the public and property from imminent danger, the City must be prepared for emergencies.

The City's response to emergency depends on the scale of the emergency faced by the community. Small scale emergencies occur daily within the City as a result of medical emergencies, traffic accidents and the like. For these types of emergencies, the usual first response is by the City's Police or Fire Department. An estimated 60 percent of the calls received by the Fire Department are for medical response and 26 percent are for other citizen response calls, many of which are related to some perceived emergency need.

For disasters or other emergencies which threaten significant portions of the community, a different level of emergency response planning is required. The State requires every community to prepare a local emergency preparedness plan to respond to such natural disasters as floods and earthquakes, and man-made disasters such as a hazardous materials spill. These plans are to be reviewed and updated every four years and approved by the State Office of Emergency Services. This section of this Chapter focuses on the City's Emergency Plan.

The California Office of Emergency Service is responsible for preparing the California State Emergency Plan and for coordinating and supporting emergency services provided by local governments. The responsibility for immediate response to emergencies, such as fires and earthquakes, rests with local government agencies and segments of the private sector, with support services provided by other jurisdictions and/or State and Federal agencies. In the event of a major emergency, the normal governmental organization converts to one more effective in coping with potential public health and safety problems.

Plan Implementation and Responsibility

The City of Fremont's Emergency Plan (1989) was developed in compliance with State requirements. The plan is a comprehensive approach to emergency preparedness, addressing possible hazards which might result from an emergency such as a natural disaster, technological incident, nuclear defense, and civil disorder or terrorism. The Plan provides the basic guidelines for organization, authority, duties, services and staff during a disaster. The Plan is intended to be coordinated with State, regional and County emergency plans. The role of every organization, agency or activity expected to contribute to an emergency response is identified in the plan. The plan is designed to not only consider the affects of a single natural catastrophe (such as an earthquake), but emergency problems which often result from major disasters. For example, an earthquake could also cause massive failure of an upstream dam or loss of water pressure needed to fight fires, each of which require a specific type of response to reduce community risk.

To improve the City's performance in the event of disaster, a Disaster Council has been established within the City to assess emergency response to actual incidents. This Council is comprised of staff from various departments, and representatives of the School and Hospital Districts.

Emergency Facilities

In the event of a large scale disaster or emergency, the City's Emergency Operations Center (EOC) would be activated. Several primary emergency facilities could be opened to provide other types of community assistance in the event of an emergency. These facilities would be established in existing City buildings such as the City Government Building, all fire stations, various community centers, the Fremont Main Library, the Animal Shelter, the Senior Multi-Service Center and the Liberty Street Annex. The type of use for each facility would depend on the disaster and the particular needs of the community at that time. Other critical facilities which could be utilized in an emergency are shown on Figure 10-9, Critical Facilities.

FREMONT GENERAL PLAN

HEALTH AND SAFETY SECTION

CRITICAL FACILITIES

LEGEND

- ACTIVE FAULT TRACES
- EXISTING AUTOMOBILE BRIDGE
- FUTURE AUTOMOBILE BRIDGE
- EXISTING RAILROAD/B.A.R.T. BRIDGE
- FUTURE RAILROAD/B.A.R.T. BRIDGE
- EXISTING FOOT BRIDGE
- EXISTING INTERCHANGE
- ROAD SUBJECT TO LANDSLIDE CLOSURE
- AREA SUBJECT TO INUNDATION BY 100 YEAR FLOOD
- AREA SUBJECT TO TSUNAMI AND FLOOD INUNDATION
- SCHOOL — Elementary, High School, Junior High, Junior College
- FIRE STATION
- CITY HALL
- WASHINGTON HOSPITAL

CITY OF FREMONT BOUNDARY

SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

0' 2000' 4000'

NORTH

BASE MAP DATE: MAY, 1989

Source Information Date: April, 1990

FIGURE 10-9

There are a number of potential sites for emergency shelters in the event of a natural disaster or other emergency. The type of shelter and locations vary depending upon the type and geographic area of the disaster. In the event of a natural disaster such as an earthquake, temporary shelters might be used, while in the event of a disaster involving toxic gasses, evacuation or shelter in buildings might be used. Responsibility for establishing emergency shelters rests with the American Red Cross which has a national charter to provide functions relating to sheltering for natural and technological disasters.

Emergency Evacuation Routes

Fremont's Emergency Plan provides policies and procedures for the evacuation, dispersal, or relocation of people from hazardous areas during natural disasters to less threatened areas. The plan also describes the organization and responsibilities for conducting movement operations. The need for evacuation routes and the appropriate routes will vary for each type of disaster. For example, if the James Turner dam fails, evacuation would be directed away from Niles Canyon, the most likely course for floodwater. On the other hand, Niles Canyon would be an appropriate evacuation route for other types of disasters. Evacuation routes suited for different types of potential disasters are shown in the City's Emergency Plan (described above).

Several areas of the City could become isolated during an emergency due to road closure. Because routes may be impassable, alternate evacuation routes out of potentially affected areas are also suggested in the Emergency Plan.

Projections

Cities can identify potential disasters and have an adequate plan and appropriately trained personnel to respond when one occurs. The City's current efforts to prepare for disaster and to learn from past efforts should improve the City's performance. Maintenance of current training programs and regular review and updating of the City's emergency plan will be necessary.

NOISE

Excessive noise is a health concern for a community. At particularly high levels noise itself can have damaging affects on health. At lower levels noise can cause irritability, wakefulness and other conditions which have health implications and generally affect the quality of life. The purpose of this section of the Health and Safety Chapter is to appraise noise problems and provide guidance to avoid these problems in the future. Good land use planning requires consideration of the impacts of environmental noise. This section follows the guidelines adopted by the State Office of Noise Control (section 46050.1 of the Health and Safety Code) and meets the requirements

in section 65302(f) of the California Government Code. The "Setting" and "Projections" section summarize information found in the Noise Background Report, hereby incorporated by reference.

Setting

Noise Characteristics

Noise is defined as unwanted sound. The magnitude of sound is measured in terms of decibels (dB). When sound is measured, electronic filters are usually used to emphasize the various frequencies or pitches people hear. The "A" filter is the most common, and is indicated by dB(A). Human hearing ranges from 0 dB(A) to 140-160 db(A), with pain occurring at around 120 dB(A).

Sound varies throughout the day due to such factors as traffic or individual events like a honking horn. Because of the complexity of sound levels over the course of a day, and subjective human response, sound levels are generally described as a weighted average. Weighted averages place greater emphasis on nighttime and evening noise levels because people are usually at home and high noise levels are disruptive to activities such as sleeping. The Community Noise Equivalent Level (CNEL) and the Day and Night Average Level (L_dn) are the weighted noise averages most commonly used. The L_dn has been selected to evaluate noise in Fremont.

Impacts of Noise

The effects of noise on people can be grouped into three categories: subjective effects, interference with activities, and physiological effects. Subjective effects of noise are difficult to quantify. In a typical environment, about 10 percent of the population will object to any noise not of their own making regardless of the noise level. Subjective complaints increase when there is a large difference between the background noise and the noise source.

Interference can occur at a number of different noise levels depending upon the activity. Face to face conversation can occur with background noise levels of up to 66 dB(A), and group conversations with levels up to 50 or 60 dB(A). Sleep interference varies with the individual and the cycle of sleep. The California Office of Noise Control recommends individual events or isolated noises not exceed 50 dB(A) in bedrooms.

Physiological symptoms of noise levels above 70 dB(A) can include constriction of the blood vessels, changes in breathing and dilation of the pupils. Steady noises of 90 dB(A) have been shown to increase muscle tension and impair decision making. Long term exposure to noises above 70 dB(A) can cause hearing loss.

Noise Conditions in Fremont

Various sources throughout Fremont contribute to the overall noise environment. The most significant sources are transportation noise from vehicular traffic and railroads. industry, mechanical equipment and recreational activities. Other sources are less significant but may be important at a particular location.

Most major transportation routes (and especially those used by trucks) are significant sources of noise. In Fremont, major highways include I-880, I-680 and State Route 84. Major roads include Mission Blvd, Decoto Rd, Paseo Padre Parkway, Thornton Ave., Peralta Blvd., Central Ave., Blacow Rd., Mowry Ave., Walnut Ave., Stevenson Blvd., Grimmer, and Durham Rd. Noise measurements have been made on many of the roads between 1987 and 1989 (refer to Health and Safety Background Report for location and measurements). The highest noise levels occur along I-880 and I-680 at a distance of 100 feet from the center of the road. Mission Blvd is the next highest generating an L_dn of 68-73 dB. Streets such as Stevenson, Mowry, and Fremont Blvd generate an L_dn of 65-67 dB's at a distance of 100 feet from the center of the road. The existing L_dn has been calculated for each major street using a noise model (maps of existing noise contours can be found in the Noise Background Report to this General Plan).

Rail lines are another source of transportation related noise. Fremont has several rail lines crossing through the City as well as the BART rail-transit line. Noise measurements have been conducted at several locations along the lines. A train noise prediction model has been used to calculate the noise from railroads.

Industrial noise is another major noise source. Industrial noise sources are generally only significant in industrial areas. Other significant sources of noise include gas stations, car washes, fire stations, air conditioning units, mechanical equipment, child care centers and public schools. Although these sources do not usually produce sound levels as great as those from industry, they are more frequently located near residential or other noise sensitive areas and are often sources of irritation and complaints.

The city has no commercial, military or general aviation airports. There is a temporary glider facility, but this presents no noise interference with residential development. One helistop is located in the Central Business District. Noise generated by helicopter activity is regulated by the use permit for this facility.

There are no heliport operations, jet engine test stands, or any other ground facilities and maintenance functions related to airport operation in Fremont.

Projections

Transportation will continue to be the most significant source of noise in the future. The continued growth of Fremont and surrounding areas will add to traffic on existing roads and highways. The projected increases in noise will not be significant on most secondary roads as traffic levels generally must increase by 100% for a noise levels to increase by 3 decibels. A change in 3 dB(A) or less is barely noticed by most people. The effects of increased commute traffic on major thoroughfares may be more significant due to volume and speed of the traffic. See Figure 10-10, for projected noise levels.

Construction of major roadways such as an extension of State Route 84 to Mission Blvd or an I-680 to I-880 connector, and widening of existing Freeways such as I-880, may lead to a significant increase in noise levels. Noise mitigations such as soundwalls will be needed to maintain acceptable noise levels in sensitive areas.

New railroad passenger service has been proposed to link Fremont with the South Bay. The increased use of existing lines or the use of new lines will increase noise levels. Assuming that the new commuter train service is similar to the Peninsula Cal Train Service, the L_dn along the new commuter line would be in the range of 70 - 75 dB(A) at a distance of 100 feet from the tracks. Noise adjacent to the tracks could impact existing and future land uses. As proposals for this service are advanced, the City will evaluate the need for noise mitigation.

Industrial activity and noise will continue to increase as currently vacant industrial parcels are developed. This will have little affect in existing residential or more noise sensitive areas. Noise from industry may become more of a problem if currently designated industrial land is converted to residential or other noise sensitive uses.

There are no changes anticipated in air-traffic related noise.

FREMONT GENERAL PLAN

FIGURE 10-10

2010 NOISE EXPOSURE IN FREMONT

LEGEND

(Shaded area shows where the noise level exceeds an Ldn of 60 dB. Shielding due to buildings, soundwalls and local terrain not taken into account.)

ILLINGWORTH & RODKIN, INC.
ACOUSTICAL ENGINEERS

CITY OF FREMONT BOUNDARY

SAN FRANCISCO BAY NATIONAL WILDLIFE REFUGE BOUNDARY

0 2000 4000

NORTH

BASE MAP DATE: MAY, 1989

Figure 10-10

Goals, Objectives, Policies and Implementation

Health and Safety Goals

Protection of the health and safety of its citizens is one of the primary jobs of local government. A city's planning must take into account physical constraints and ensure that necessary safety services can be provided. Many risks cannot be eliminated. Residents of the Bay Area must all live with the virtual certainty of another major earthquake, and that fires, floods and other natural disasters will occur. The overall goal of local government is to minimize risks to residents and provide appropriate services and planning to address problems when they occur. The following goals, objectives, policies and implementation measures are the City of Fremont's response to some of the health and safety risks facing this City.

GOAL HS 1: **Minimum feasible risk to the community from land instability and other non-seismically induced geologic hazards**

GOAL HS 2: **Minimum feasible risk to residents and property due to seismic activity**

GOAL HS 3: **Minimum feasible risk to residents and property due to flooding and flood induced hazards**

GOAL HS 4: **Minimum feasible risk to residents and property due to fire hazards**

GOAL HS 5: **A five minute response time for emergencies in areas below the toe of the hill**

GOAL HS 6: **Minimum feasible risk to lives and property due to the use and storage of hazardous materials and waste**

GOAL HS 7: **An emergency preparedness plan which provides effective response in the event of a natural or manmade disaster**

GOAL HS 8: **Noise at an acceptable level throughout the community**

HEALTH AND SAFETY (HS) GOAL 1:
Minimum feasible risk to the community from land instability and other non-seismically induced geologic hazards

OBJECTIVE HS 1.1: **Development which responds to and minimizes geologic hazards**

Policy HS 1.1.1: Control development in areas subject to geologic hazards and land instability.

Implementation 1: Continue to maintain Hill Area policies limiting the intensity and location of development in the geologically unstable Hill Area (see Land Use Chapter)

Implementation 2: Continue to prohibit development in unstable areas identified on Figure 10-1, Slope Instability Map, unless geologic investigation demonstrates hazards can be mitigated to an acceptable level. Require mitigation measures identified by the investigation to be incorporated into the conditions of approval for a project.

Policy HS 1.1.2: Require proposed new development in areas of potential geologic hazard identified on Figure 10-1, Figure 10-3, and Figure 10-5 of this General Plan to evaluate geologic hazards and sufficiently mitigate hazards through site planning, appropriate construction techniques, building design and engineering.

Implementation 1: Continue to require site-specific geo-technical studies for land development or construction in areas of potential land instability shown on Figure 10-1, Slope Instability Map of the General Plan. The studies should determine depth of bedrock, soil stability, and other localized geotechnical considerations. In areas designated as I_2 on the Slope Instability Map, the study should also address soil stability in the vicinity of the development or construction site.

Implementation 2: Continue to require developers to include drainage, erosion and landslide mitigation measures, where necessary, to reduce landslide potential.

Implementation 3: Grading plans should minimize earth moving activity and site grading in areas of potential land instability, generally shown in Figure 10-1. The reduction, elimination or avoidance of identified geo-seismic hazards should be based on structural and non-structural techniques generally recognized by geo-technical consultants in the Bay Area to be applicable and feasible. Excessive grading to stabilize or reconstruct landforms should be discouraged.

HEALTH AND SAFETY (HS) GOAL 2: Minimum feasible risk to residents and property due to seismic activity

OBJECTIVE HS 2.1: Development which responds to and minimizes the hazards related to expected seismic activity

Policy HS 2.1.1: Locate development to minimize potential damage resulting from seismic activity.

Implementation 1: Continue to comply with the provisions of the Alquist-Priolo Act and other seismic safety criteria established by the City of Fremont. Required geotechnical studies shall include a determination of the location of a fault (if on site), and an analysis of the site response to potential ground shaking. Continue to prohibit construction of structures for human occupancy (as defined by the State) within at least 50 feet of an identified fault trace as required by State law. In addition, the construction of attached garages within 50 feet of an identified fault trace is prohibited.

Implementation 2: Require site specific soils, geologic and/or geotechnical engineering studies prior to development approval of sites in areas identified with moderate to high (S4) or Severe Shaking Potential (S5) shown on Figure 10-3 of the General Plan, Groundshaking and Liquefaction Potential Map.

Implementation 3: Require site specific soils, geologic and/or geotechnical engineering studies prior to approving development on sites in areas identified as L3(w), L4 or L5 as shown on Figure 10-3 of the General Plan, Groundshaking and Liquefaction Potential Map.

Policy HS 2.1.2: Maintain construction and soil engineering standards which minimize earthquake danger to building occupants.

Implementation 1: Continue to require appropriate engineering and design mitigations for structures to minimize seismic hazards.

Implementation 2: Continue to require review and analysis of applicant-submitted geotechnical studies by a qualified consulting geotechnical engineer reporting to the City of Fremont. Projects must be built in conformance with the recommendations of the City's consulting engineer.

Policy HS 2.1.3: Locate critical facilities and systems vital to the public health and safety (e.g., water, power and waste disposal systems, police and fire stations, hospitals, and communication facilities) away from areas of greatest land instability, and design such facilities to mitigate any seismic or geologic hazards associated with the development site.

Implementation 1: Continue to require site specific geotechnical studies prior to construction of, or additions to, critical facilities when located within or near Alquist-Priolo Special Studies zones as shown on the Seismic Zones Map, Figure 10-4 of the General Plan.

Implementation 2: Continue to require new roads, bridges and utility lines crossing active fault traces be designed and developed in a manner to minimize damage from seismic or geologic hazards.

Implementation 3: Encourage special districts and private utility providers to retrofit existing utility lines which cross active faults with automatic shutoff devices or other means to accommodate possible surface rupture.

Policy HS 2.1.4: Continue to comply with State law related to rehabilitation or removal of unreinforced masonry structures susceptible to seismic hazards and damage.

Implementation 1: Prepare a study analyzing various alternatives for an effective program to mitigate hazards related to unreinforced masonry buildings. Based on this analysis, select and implement a program.

HEALTH AND SAFETY (HS) GOAL 3:
Minimum feasible risk to residents and property due to flooding and flood induced hazards

OBJECTIVE HS 3.1: **Development locations and standards which limit the potential risks to health and safety and the risk of severe economic loss due to flooding and flood induced hazards**

Policy HS 3.1.1: Continue to prohibit development of habitable (as defined by the Federal Emergency Management Agency) structures within the 100 year flood zone shown on Figure 10-6 of the General Plan, Inundation Hazards Map, unless the structures are designed to comply with existing National Flood Insurance Program criteria for construction.

Implementation 1: Enforce the City's existing flood control ordinances and regulations, amending them as necessary to conform with National Flood Insurance Program Criteria.

Implementation 2: Require flood resistant siting and/or construction as a condition of subdivision or development approval, in areas subject to minor flooding. When possible, limit amount of impervious coverage to reduce potential hazards of excessive run-off.

Implementation 3: Continue to refer all proposed projects adjacent to floodways and floodplains to the Alameda County Flood Control District for review and comments.

Implementation 4: Review CALTRANS projects for freeway improvements to ensure appropriate sized culverts and pipes are used, or existing inadequate facilities are replaced to accommodate 100 year flood requirements.

Policy HS 3.1.2: Maintain an evacuation plan in the event of inundation related to dam failure (see Emergency Preparedness Section for Implementation measures).

Policy HS 3.1.3: Ensure appropriate mitigations for increased risk due to possible failure of any major water storage facility.

Implementation 1: Evaluate risk and potential damage resulting from failure of any water storage facilities. Consider impacts on downstream property owners and require appropriate mitigations to minimize risks. Consider such risk in reviewing proposed subdivisions and site plans for potentially affected properties.

HEALTH AND SAFETY (HS) GOAL 4:
Minimum feasible risk to residents and property due to fire hazards

OBJECTIVE HS 4.1: Development locations and standards which limit the potential health and safety risks, and the risks of severe economic loss due to fire hazards

Policy HS 4.1.1: Provide an adequate level of fire equipment and personnel to protect the community.

Implementation 1: Continue to implement plan for improving fire service through expansion to 11 stations, movement of stations and other improvements.

Implementation 2: Periodically review existing and projected land uses within the City in regard to the need for fire stations, staff and equipment.

Implementation 3: Continue to review multi-story high occupancy development to ensure compliance with the Uniform Building Code and Fremont Fire Department standards for construction and adequacy of water flow for fire protection.

Implementation 4: Continue to require adequate fire flow (water quantity and duration) and hydrants as per City standards.

Implementation 5: Continue to encourage improvements where the required fire flow and minimum residual water pressure standards are not met. However, water service should not be provided in a way which allows for development of the Hill Face in a piecemeal fashion. Improvements should be part of an overall public interconnected network.

Implementation 6: Consider designating areas not meeting the required fire flow or minimum residual water pressure standards as Hazardous Fire Areas.

Policy HS 4.1.2: Require adequate access and clearance for fire equipment, fire suppression personnel, and evacuation.

Implementation 1: Continue to review projects for necessary fire access and clearances.

Implementation 2: Continue to review industrial, commercial and institutional buildings more than 35 feet in height for adequacy of access and clearance, and require additional vehicular access or clearance areas as determined by the Fire Department.

Implementation 3: Continue to enforce existing regulations related to fire resistant construction, early warning fire detection system installation. Maintain accurate information on contents and processes used within structures and location and number of structures on a site.

Policy HS 4.1.3: Require fire mitigation measures in developments proposed outside a five minute response time area. Limit development in those areas where, despite fire mitigation measures, an acceptable level of protection is considered unattainable.

Implementation 1: Continue to review hillside subdivisions for adequate fire services and mitigation measures.

Implementation 2: Continue to require properties or processes with a potentially higher risk, or outside the five minute response area for fire protection services, to provide supplemental mitigation measures such as wetbands, fire resistant construction, sprinkler systems and early warning fire detection systems.

Implementation 3: Continue regulations and enforcement procedures to ensure maintenance of fire breaks in privately owned areas in the hills.

Policy HS 4.1.4: Promote fire safety and fire prevention in the community.

Implementation 1: Continue to provide fire safety demonstrations and presentations at public schools, civic and social organizations and other public gatherings.

Implementation 2: Continue to provide fire safety training at schools, industries and institutions.

Implementation 3: Continue to perform necessary analysis to focus fire prevention activities on current fire safety problems in Fremont.

HEALTH AND SAFETY (HS) GOAL 5:
A five minute response time for emergencies in areas below the toe of the hill

OBJECTIVE HS 5.1: **Maximum feasible achievement of a five minute response time for areas where response time is identified as achievable**

Policy 5.1.1: Continue to provide emergency response services throughout the City.

Policy 5.1.2: Consider improvements in services and facilities to provide maximum feasible achievement of a five minute response within the City.

Implementation 1: Periodically review the achievement of response-time goals, and identify possible improvements in service or facilities.

Policy 5.1.3: Continue to provide necessary training and equipment to improve emergency response.

Implementation 1: Continue to provide fire suppression and rescue service training.

Implementation 2: Periodically review training facilities to evaluate the need for expansion of existing facilities and the construction of new facilities.

HEALTH AND SAFETY (HS) GOAL 6:
Minimum feasible risk to lives and property due to the use, storage and transportation of hazardous materials

OBJECTIVE HS 6.1: **Sufficient regulation of land use to minimize potential health and safety risks associated with current or past use of hazardous materials in Fremont**

Policy HS 6.1.1: Residential uses shall not be located in areas which could expose future residents to unacceptable health and safety risks.

Implementation 1: Assess risk related to hazardous materials when residential development is considered in proximity to an industrial area.

Policy HS 6.1.2 Ensure clean up of hazardous materials prior to a change in use from industrial to other uses.

Implementation 2: Continue to require an assessment of the past use of hazardous materials on proposed development sites where a change in use is proposed. Continue to require appropriate clean-up of contaminated sites prior to development.

Policy HS 6.1.3: Compliance with State law requiring adoption of a Hazardous Waste Management Plan.

Implementation 1: After State approval of the Alameda County Hazardous Waste Management Plan, adopt the plan by General Plan amendment, and revise the zoning ordinance as required.

OBJECTIVE HS 6.2: Sufficient regulation of the storage, transport and handling of hazardous materials within the City

Policy HS 6.2.1: Require that hazardous materials be managed in a manner that minimizes the risk to workers and residents.

Implementation 1: Enforce the provisions of the City's Hazardous Materials Ordinance.

Implementation 2: Continue to monitor and encourage the ban on transport of hazardous materials through Niles Canyon.

Implementation 3: Periodically review and evaluate the City's truck routes to ensure minimum possible risk to the community from the transport of hazardous materials on City streets.

OBJECTIVE HS 6.3: Sufficient emergency plans and response capability to respond to a hazardous material emergency

Implementation 1: Respond to hazardous materials related emergencies according to the guidelines in the Hazardous Materials Area Plan.

Implementation 2: Continue to promote appropriate training and preparation for a hazardous materials emergency within appropriate City departments.

HEALTH AND SAFETY (HS) GOAL 7:
An emergency preparedness plan which provides effective response in the event of a natural or man-made disaster

OBJECTIVE HS 7.1: **Efficient and effective City government operation in case of any catastrophic emergency or disaster**

Policy HS 7.1.1: Maintain an Emergency Plan and adequately trained personnel to respond to manmade or natural disasters.

Implementation 1: Review and update Fremont's Emergency Plan.

Implementation 2: Continue to promote awareness and understanding of the City's Emergency Plan among City employees.

Implementation 3: Develop departmental emergency standard operating procedures (ESOP) to correspond to the assigned departmental tasks in the Fremont Emergency Plan.

Implementation 4: Continue to conduct emergency preparedness exercises for City staff to test the emergency service operations and train personnel in its use.

Policy HS 7.1.2: Promote public awareness of Fremont's Emergency Plan and encourage all citizens to take responsibility for their own safety in the event of a disaster.

Implementation 1: Continue to conduct seminars and make public presentations on emergency preparedness.

Policy HS 7.1.3: Coordinate Fremont's Emergency Plan with other local jurisdictions, utility districts and regional agencies to anticipate cumulative impacts during times of disaster.

Implementation 1: Review adjacent jurisdictions' plans and resolve areas of potential conflict.

HEALTH AND SAFETY (HS) GOAL 8:
An acceptable noise level throughout the community

OBJECTIVE HS 8.1: A noise environment which meets standards

Policy HS 8.1.1: New residential development projects shall meet acceptable exterior noise level standards. The "normally acceptable" noise standards for new land uses established in Land Use Compatibility For Community Exterior Noise Environments shown in Figure 10-11 shall be used as modified by the following:

- The maximum acceptable noise levels in residential areas is an L_dn of 60 dB. This level shall guide the design and location of future development, and is a goal for the reduction of noise in existing development. A 60 Ldn goal will be applied where outdoor use is a major consideration (e.g., backyards in single family housing developments and recreation areas in multi-family housing projects). The outdoor standard will not normally be applied to small decks associated with apartments and condominiums, but these will be evaluated on a case by case basis. When the City determines that providing an outdoor L_dn of 60 dB or lower cannot be achieved after the application of feasible mitigations, an Ldn of 65 may be permitted at the discretion of the City Council.

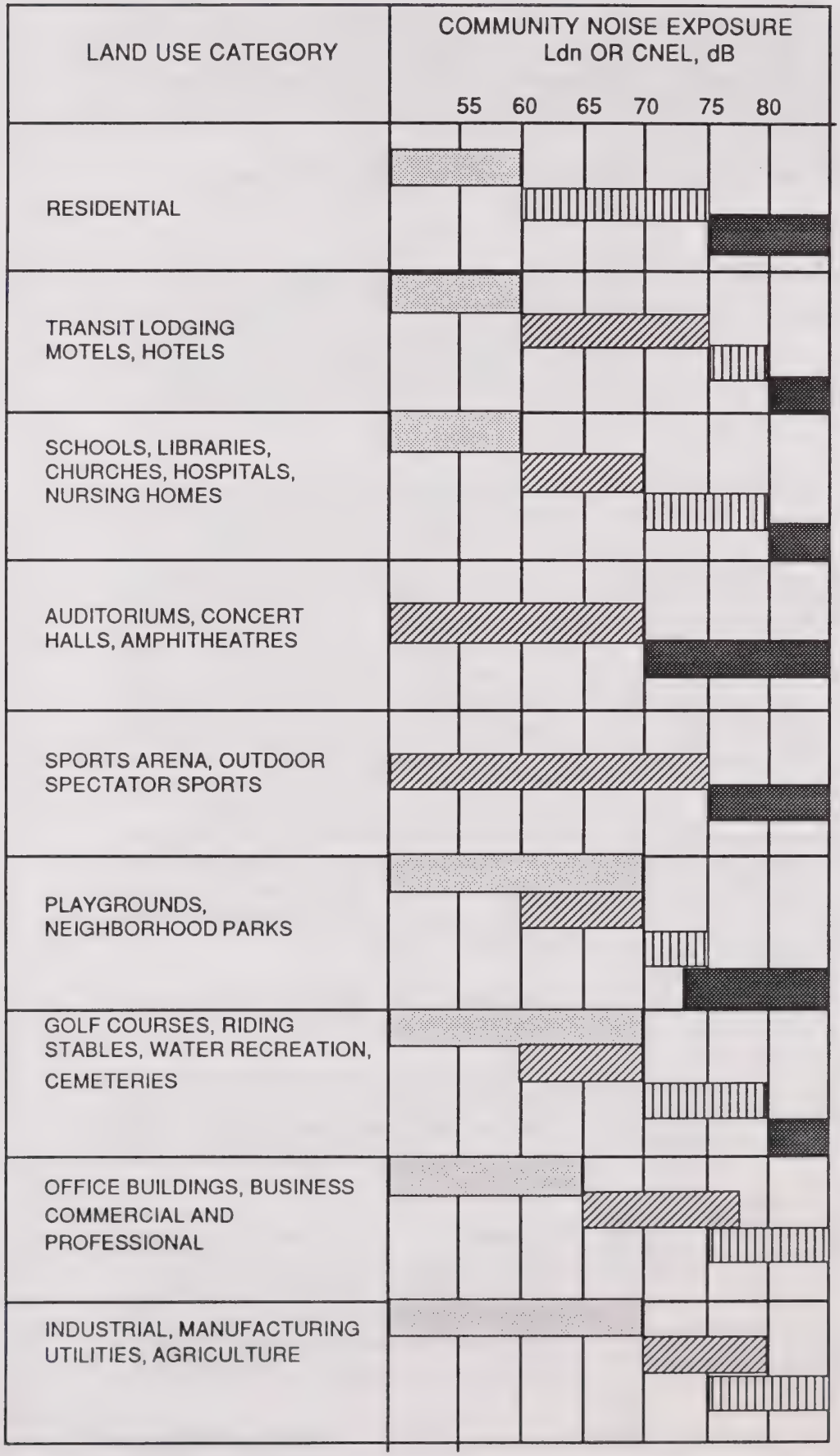
- Indoor noise level shall not exceed an L_dn of 45 dB in new housing units.

- If the noise source is a railroad, then the outdoor noise exposure criterion can be 70 L_dn for future development, recognizing that train noise is characterized by relatively few loud events.

- Noise levels in new residential development exposed to an exterior Ldn of 60 dB(A) or greater should be limited to a maximum instantaneous noise level in bedrooms of 50 dB(A). Maximum instantaneous noise levels in other rooms should not exceed 55 dB(A).

FIGURE 10-11

LAND USE COMPATIBILITY FOR COMMUNITY EXTERIOR NOISE ENVIRONMENTS



INTERPRETATION

NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

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- Appropriate interior noise levels in commercial, industrial, and office buildings are a function of the use of space and shall be evaluated on a case by case basis. Interior noise levels in offices generally should be maintained at 45 L_eq (hourly average) or less.

- These guidelines are not intended to be applied reciprocally. In other words, if an area currently is below the desired noise standards, an increase in noise up to the maximum should not necessarily be allowed. The impact of a proposed project on an existing land use should be evaluated in terms of potential for adverse community response based on a significant increase in existing noise levels, regardless of the compatibility guidelines.

Implementation 1: Continue to use noise guidelines and contours to determine if additional noise studies are needed for a proposed new development. Prepare a format and guidelines for noise studies.

Implementation 2: New residential development shall not be allowed where the ambient noise level due to commercial or industrial noise sources will exceed the noise level standards as set forth in Figure 10-12, modified by the following as necessary:

- Each of the noise level standards specified in Table 10-2, Noise and Land Use Compatibility Standards for Industrial and Commercial Noise, shall be reduced by 5 dB(A) for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.

Policy HS 8.1.2: Protect the noise environment in existing residential areas. In general, the City will require the evaluation of mitigation measures for projects under the following circumstances:

- The project would cause the L_dn to increase by 3 dB(A) or more,

- An increase would result in an L_dn greater than 60 dB(A)

- The L_dn already exceeds 60 dB(A).

- The project has the potential to generate significant adverse community response.

Policy HS 8.1.3 Noise created by commercial or industrial sources associated with new projects or developments shall be controlled so as not to exceed the noise level standards set forth in Table 10-2 as measured at any affected residential land use.

Table 10-2
Noise and Land Use Compatibility Standards for New Industrial and Commercial Noise Sources

Maximum Cumulative Duration of Noise Event in Any One-Hour Period	Exterior Noise Level Standards, dB(A) Daytime 7 AM – 10 PM	Nighttime 10 PM – 7 AM
30 Minutes	50	45
15 Minutes	55	50
5 Minutes	60	55
1 Minute	65	60
0 Minutes	70	65

Policy HS 8.1.4: Control noise at its source to maintain existing noise levels, and in no case to exceed the acceptable noise levels as established in the Land Use Compatibility for Community Exterior Noise Environments (Figure 10-11).

Implementation 1: Consider adopting a noise ordinance to control noise generating activities such as horns, unmufflered engines, loudspeakers, etc.

Policy HS 8.1.5: Protect schools, hospitals, libraries, churches, convalescent homes, and other noise sensitive uses from noise levels exceeding those allowed in residential areas.

Implementation 1: Locate noise sensitive uses away from noise sources unless mitigation measures are included in development plans.

Policy HS 8.1.6: Design city streets to reduce noise levels in adjacent areas.

Implementation 1: Continue to require soundwalls, earth berms, set backs and other noise reduction techniques as conditions of development approval.

Policy HS 8.1.7: Encourage other agencies to reduce noise levels generated by roadways, railways, airports, and other facilities.

Implementation 1: Continue to work with the county Airport Land Use Commission (ALUC), State Office of Noise Control (ONC), and other agencies to reduce noise generated from sources outside of the City's jurisdiction.

Implementation 2: Work closely with Caltrans and other appropriate agencies to adequately quantify and mitigate the noise impacts associated with any extension of Route 84, the construction of an I-680 to I-880 connector, and the possible development of a railway commuter system or inter-city train service.

Chapter 11
Administering the General Plan

The Fremont 1990 General Plan is a City guide for decision making. Information provided in the Settings and Projections sections of the Plan combined with the background documents provide much of the basis for the City's planning. The goals, objectives, policies and implementation measures in each chapter of this Plan are the guides to decision making.

Internal Consistency

By State law, all elements of a plan must be internally consistent. Policies, goals, and objectives should not conflict irreconcilably with one another. However, the General Plan is meant to be a "Constitution" for the City's development. Just as with the United States Constitution, there may be times when the direction suggested in one objective or goal will need to be reconciled with others. Other times the land use description may not be clear. Since the General Plan is general in nature, and diagram lines are not precise, differences in interpretation are bound to arise when applying policies to specific actions. On such occasions, a finding from the Planning Commission should be requested. On appeal, the City Council is the final arbiter and interpreter as to the intent of the Plan.

Of utmost importance in the interpretation of the plan are the Fundamental Goals. These are the foundation of the plan and provide a guide post as to the intended direction.

Consistency with Development Related Ordinances and Policies

In addition to internal consistency, all of the City's development ordinances and policies must be consistent with the General Plan. The 1990 Fremont General Plan retains much of the previous General Plan policy direction; however, the 1990 Plan does set new policy direction. Upon approval of the 1990 Plan, its policy direction will prevail. In cases where there are differences between specific regulations and the 1990 General Plan, the Plan must prevail. To achieve consistency between the 1990 General Plan and development related ordinances and policies, the following actions are required:

- **Modify Zoning, Subdivision, Grading, and any other development oriented ordinance:** Within two years of adoption of the 1990 General Plan, all of the development related ordinances must be reviewed and brought into conformance with the 1990 Plan. For instance, the 1990 General Plan broadly describes the appropriate

uses in each land use category. The Zoning Ordinance establishes zoning districts which specify which land uses may be allowed as principal permitted uses, accessory uses, and conditional uses. The Zoning Ordinance must be modified to implement the broad land use descriptions in the 1990 Plan. Prior to the Zoning Ordinance modifications, if there is a difference between the Plan and the Zoning Ordinance, the Plan prevails. As with internal consistency issues, a finding from the Planning Commission can be requested during the interim period between Plan adoption and Ordinance revision. The purpose of the finding will be to resolve interpretation differences. Separate public hearings will be required before the Ordinance will be adopted.

- **Modify Zoning Maps:** The 1990 General Plan Land Use Diagrams designate general land uses for property within the City. The Zoning Maps provide a much more specific designation for each property. The following table lists each of the 1990 General Plan land use designations and the Zoning districts deemed to be consistent with that designation. Within two years, all changes to the Zoning Maps must be completed to bring the Zoning Maps and General Plan diagrams into conformance. If there is a conflict while this task is being accomplished, the 1990 General Plan map will prevail. A finding can be requested from the Planning Commission during this interim time to resolve interpretation differences.

I. Residential

General Plan Designations Residential Density	(Range)	Zoning District
.25 - 1.0	1	R-1-160
.5 - 1.5	2	R-1-80
1.0 - 2.3	3	R-1-40
2.0 - 3.5	4	R-1-20
3.0 - 5.0	5	R-1-10
4.0 - 6.0	6	R-1-8
5.0 - 7.0	7	R-1-6
6.5 -10.0	8	R-1-6, R-1-4, R-2
11.0 - 15.0	9	R-G-40
15.0 - 18.0	10	R-G-29
18.0 - 23.0	11	R-G-24
23.0 - 27.0	12	R-G-19
27.0 - 35.0	13	R-G-16
35.0 - 50.0	14	R-G-12
50.0 - 70.0	15	R-G-9

II. Commercial

General Plan Designation		Zoning District
Community	(C)	C-C
High Volume	(HV)	C-R or new zone to be created
Neighborhood	(N)	C-N
Office	(O)	C-O
Thoroughfare	(T)	C-T
Central Business District	(CBD)	CBD

III. Industrial

General Plan Designation		Zoning District
Light Industrial	(L)	New zoning category required
Restricted Industrial	(R)	I-R
General Industrial	(G)	G-I

IV. Other

General Plan Designation	Zoning District
Hill Area Open Space	O-S
Hill Face Open Space	O-S
Institutional Open Space	O-S
Open Space	O-S
Agriculture	A
Public Facility	New zoning district to be created

Planned Districts (P) may be used for any land use designation, as long as uses are consistent with the General Plan designation. Overlays may be combined with any designation.

- **Modify Development Policies:** The City has used a set of "Development Policies" to evaluate project requests. The "Development Policies" contain policy level statements, standards, administrative procedures, and design guidelines. Many of the policy level statements in the "Development Policies" are incorporated in the 1990 General Plan. The standards and administrative procedures which implement the 1990 General Plan will be incorporated into the appropriate ordinances. Those sections of the "Development policies" which are viewed as solely advisory guidelines will be retained in the "Development Policies" document.

Consistency with Development Requests and Actions. All development must conform to the General Plan and related development ordinances. Each discretionary action and each approval or denial of a development proposal should be accompanied by a brief citation of the relevant sections in the General Plan which are the basis for action. City analysis of projects will use both the Plan text and diagrams to determine conformity to the General Plan.

Consistency with Other General Plan Implementation Documents. The City's Capitol Improvement Plan, Redevelopment Plans and Specific Plans must be in conformance with the General Plan.

Interim Procedures When There is Lack of Project Consistency with the 1990 General Plan. As mentioned above, the development ordinances and zoning maps must be brought into conformance with the General Plan within two years. Previous sections have discussed the use of findings by the Planning Commission to resolved interpretation differences. There are other circumstances which will arise during the interim period where different actions will be needed.

- Where the General Plan designation of a particular property calls for a different land use than the zoning for that property and a proposed development wants to follow the General Plan designation, one of two options will be used:

  1. If the zoning category exists and the use proposed is permitted by the General Plan designation, the City will initiate the rezoning. This provision will not apply if the proposed development needs a Planned (P) district. In those circumstances, the applicant will initiate the rezoning.

  2. If the zoning category does not exist at the time of application (e.g. High Volume Retail) and the use proposed is permitted by the General Plan, the applicant will initiate a rezoning to a Planned (P) district. This district will remain until the overall zoning maps are updated. At that time, the appropriate zoning will be placed on the site.

- Where the General Plan establishes floor area ratios (FAR), requests for increases above the established thresholds shall propose a Planned District (P) until the Zoning Ordinance provides an alternate request route.

Environmental Impact Report (EIR)

The Environmental Impact Report (EIR) on the Fremont 1990 General Plan evaluates the impacts of the General Plan. The EIR is a separate document available from the City. An EIR evaluates impacts at the same level of detail as the underlying action upon which the EIR is based. In this instance, the EIR assesses the General Plan which is both a broad guideline in regards to the City's development, but also includes some specific implementation measures. The implementation measures could be considered to be a "program of actions" and the General Plan EIR a "program EIR". As such, the EIR evaluates the general impacts arising from the program, rather than site-specific impacts. The specific project impacts that may result from projects or implementation measures undertaken under the Plan will be assessed on a project by project basis. The General Plan EIR can be used as a foundation of information and current conditions by which to assess future impacts.

The City is required to monitor the progress on implementing the mitigation measure suggested by the EIR and incorporated into the General Plan or subsequent actions. The annual report on the General Plan is the appropriate forum for a status report on the implementation of the mitigation measures.

REVIEW AND IMPLEMENTATION OF THE GENERAL PLAN

To be an effective guide to the City's decision making, the General Plan should be frequently monitored to gauge progress on its implementation and periodically reviewed to determine whether the plan still reflects the goals of the community.

As to the Plan implementation, the Plan includes over two hundred measures, not all of which can be accomplished at one time given normal budgetary and staff levels. The City must therefore establish priorities as to which implementation measures it wishes to address in any given year. Zoning ordinance changes and rezoning of parcels to be consistent with the General Plan must be completed within two years of General Plan adoption and must, therefore, be given top priority. Other implementation measures may take longer to initiate or complete. After the General Plan is adopted, the City Council will establish a priority list for preparing implementation actions. The annual report on the status of General Plan (required by the State) will include a report on implementation action progress to allow the Council to reconsider priorities for completion. The first annual report will also include a "clean up" amendment to correct or refine plan provisions based on experience in working with the Plan.

For periodic review, a comprehensive review of the Plan should take place every five years to assure its relevancy (as suggested by the State Guidelines).

MODIFYING / AMENDING THE GENERAL PLAN

The process for amending a General Plan is largely set forth in State law. By law, the General Plan can only be amended a maximum of four times per year (except in certain cases providing low and moderate income housing). However, at each of those times several amendments may be considered. In order to meet required deadlines, a schedule and process for General Plan amendments has been set forth and is available from the Community Development Department. Depending on the magnitude of the change requested, an Environmental Impact Report may be required on a General Plan amendment.

An evaluation of all requested General Plan amendments shall be conducted to review the conformance of the amendment with applicable General Plan goals, objectives and policies. If amendments are intended to be approved which are not consistent with specific goals, objectives and policies, then all relevant goals, objectives and policies need to be reexamined and changed before final approval of such amendments.

Procedurally, adoption of a General Plan amendment may be accomplished in two ways:

- Adoption of a resolution; or,
- Adoption of an intent to amend the General Plan and a subsequent formal and final Council adoption of the intended amendment at a future date when the City Council finds all conditions attached at time of Council adoption of intent, have been satisfied.

Legislative History

The following amendments to the General Plan Text have been approved by the City Council since General Plan adoption in May 1991. The associated City Council resolutions and project files are available in the Community Development Department.

Chapters Affected	*Date*	*Resolution and Project Nos.*
Land Use, Housing, and Housing Background Report	12/10/92	8428/GPA-92-6

FREMONT GENERAL PLAN

APPENDICES

Primary Historic Resources

This is the list of primary historic resources as in Council Resolution 5463 in 1982, plus the GPA 1981 and GPA 1987. It is now organized by the 1989 Planning Areas and ordered by major time periods.

Where addresses were given as in the original 1968 exhibit they are the same in this list. Where addresses have been derived from the City Street Address maps they are marked with an asterisk. Field checked sites are marked with two asterisks.

Where more than one historic resource was indicated by a number in the previous labelling system, they are now separately designated on the present lists using lower case letters. The original system was a combination of a letter and a number (right column) and is replaced by the mapsheet name and a number as is in the left column. Primary historic resources are shown on the maps inside a circle. Landmark trees are marked with a triangle.

Primary historic resources that are also listed in the California Inventory (CI), National Registry (NR) or are eligible for the National Registry (EN) are marked with the appropriate acronym.

There are ten maps by planning area at a scale of inch equals five hundred feet. These cover all of Fremont and replace four maps at one inch equals two hundred feet and one city-wide map at one inch equals 2000 feet. The previous set of primary historic resource maps were created in 1967 and revised three times since. There are no Historic Resources shown on the Hill Planning Area Map; historical resources in this area are shown on the Niles, Mission San Jose or Warm Springs maps, as appropriate.

List of Planning Areas

Baylands North
Baylands South
Centerville
Central
Industrial
Irvington
Mission San Jose
Niles
Northern Plains
Warm Springs

1990 Map ID	Prior Map ID	BAYLANDS

Natural Features

1	E13	Coyote Slough
2	E11	Mowry Slough
3	E 9	Plummer Slough
4	E10	Oyster Beds

Ohlone/Mexican-Spanish/Americanization

Landings

5	E 8	Mayhew Landing; Beard's Landing; Mission Embarcadero
6	E12	Mowry Landing (in the City of Newark)

Business/Residential

9	E14	Town of Drawbridge (CI)

Industry

7	E10	Salt Ponds

1990 Map ID	Prior Map ID	CENTERVILLE
Natural Features		
1	A 1	Alameda Creek (creek channel location prior to flood control project by the Army Corps of Engineers in the early 1970's)
2	E34	Alameda Creek and environs
Ohlone		
3	E 7	Indian shellmounds near Centerville (4000 block, Alder Street)*
Americanization		
Business		
4	"B"	Centerville, early settlement (Hardscrabble, Centreville)
5	B 7	First Bank (372XX Fremont Boulevard)*
6	B 4	Old Town Complex from Firehouse to Walton (37250 to 37450 Fremont Boulevard, both sides of the street)*
7	B 1	United States Hotel site/Southern Pacific Railway Depot (3961 Peralta Court)*
Government, School		
8	B 6	Courthouse site (372XX Fremont Boulevard)* near railroad
9	B 1	Horner School site (3961 Peralta Court)*(RR depot site)
10	B 4	Town Hall site (3443X Fremont Boulevard)*(Centerville Firehall)
11	GPA 1981	Washington High School, (NR), (38442 Fremont Boulevard)
12	B 2	Japanese School (3780 Bonde Way, faces Walton Street)
Transportation		
13	B 1	Southern Pacific Railroad Depot (3961 Peralta Court)
14	B 1	Horse Railroad Depot (40157/ 37301 Fremont Boulevard)
Church		
15	E30	Holy Ghost Catholic Cemetery (5000 block, Central Avenue)
16	B 3	Centerville Presbyterian Church (CI, EN) (37218 Fremont Boulevard)
17	B 3	Presbyterian Church Cemetery (37218 Fremont Boulevard)
18	B 9	St. James Episcopal Church (CI) 37166 St. James Street

Industry

19	A34	Gravel Pits

Residential

20	B10	Dusterberry home (CI) (4623 Central Avenue)
21	B12	Cronley home (moved) (381XX Fremont Boulevard)*
22	E37	Champion home, 1357 Mowry, near Peralta intersection (restored)

1990 Map ID	Prior Map ID	CENTRAL

Natural Features

1	E51	Mission Creek (Laguna Creek) (ACFC)
2	E52	Stiver's Lagoon (Silt Pond and Nature Area next to Lake Elizabeth,
3	E39	Tyson's Lagoon (Clear Lake) (ACFC, BART)
4	E34	Gravel Pits (Bunting Pond) (ACWD)

Ohlone

5	E40	Indian Village Site-Fudenna (Tyson's Lagoon vicinity)

Americanization

6	E36	Shinn-Clough Nursery site, 1251 Peralta Boulevard and adjacent Shinn Tracts 3613 and 3792
7	A13	Bunting-Sanborn home site, (38296 Bunting Lane) (ACWD)
8	E31	Chadbourne Carriage House (Williams Historic Park) (CI) (restoration plans, COF) 39169 Fremont Boulevard, Pico site
9	A14	Ford home, (Moore-Clough)(382XX Ford Lane)
10	E41	Earl Marshall home site, west Tyson Lagoon, Walnut Avenue
11	E35	Joseph Nichols home, (Dias) (37801 Shinn Street)
12	E42	Michael Overacker home,(Svoboda) (39051 Overacker Avenue)
13	A11	Pickering home, (Karp), (sold 1990), 59 West Pickering Avenue
14	E36	Millicent Shinn House (CI)(EN) (restored) 1251 Peralta Boulevard
15	E36	Shinn Historical Park (CI) (COF) includes 1848 Sim Cottage
16	A12	Whipple-Thane home, 38555 Overacker Avenue

1990 Map ID	Prior Map ID	INDUSTRIAL
Americanization		
1	E15	Warm Springs Landing on Mud Slough
2	E15	Dixon's Landing on Coyote River
3	"E"	Harrisburg, early settlement of Warm Springs (west side of Warm Springs Boulevard; the northwest corner is the site of Peacock's Store, 47000 block Warm Springs Boulevard) (47011, 47015, 47037)

1990 Map ID	Prior Map ID	IRVINGTON
Natural Features		
1	E51	Mission Creek (Laguna Creek) (ACFC parcels)
Americanization		
2	"C"	Washington Corners, early settlement
3	C 1	Old Corners Building site (3996 Washington Boulevard)
4	C16	W.W. Hirsch building (Clark's Hall) (4000 Bay Street)
5	C 3	O.N. Hirsch Building (40979 Fremont Boulevard)
6	C 2	Odd Fellows Hall (40955, 40961 Fremont Boulevard)
7	C 4	Mack Grocery, Library, Post Office site (40984, 40986 Fremont Boulevard) (328 Broadway original address)
8	C 7	Odd Fellows Cemetery (41001 Chapel Way)
9a	C 8	Grammar School (Lincoln and Union)(near future town square)
9b	C 8	Second Horner School (3676 Union Street)(first Irvington School)
9c	C 8	Schoolhouse site, 1875, Lincoln and Union
10	C12	Gallegos Winery site and foundations (3400 Washington Boulevard)
11	C 9	Hiram Davis home, (Peixoto) (restored 1975)(40846 High Street)
12	E28	Timothy Rix home site (40400 block Davis Street)(Balboa St.)
13	C 5	Wright home (A. O. Rix) (restored 1989) (4071 Bay Street)
14	E29	Conrad Noll home (4581 Stevenson Boulevard)
15	E32	Emerson home site (Fry's Food Store, 39400 block, Fremont Boulevard) (significant trees)

1990 Map ID	Prior Map ID	MISSION SAN JOSE

Natural Features

1	E-24	Agua Caliente-north side.(COF, ACWD and EBRPD) (Goosen Ranch)
2	C-15	Irvington Fossil Beds-Bell Quarry-Sands (Quarry Hill) (I-680)
3	E-51	Mill Creek, Mission Creek (CI) (addresses include ACFC and COF)
4	E-25	Mission Peak (CI) (EBRPD Starr Ranch)
5	E-50	Mission Pass (Stockton Road) CI
6	E-46	Morrison Canyon-south side

Ohlone

7	D- 4	Indian Artifacts, Mill Creek (address is Mission Peak Regional Preserve, ownership is Fremont-Newark Community College District)
8	D-23	Indian Residence Adobes Site-north side Washington Boulevard (address is Sisters of the Holy Family, Callison Day Home, 155 Washington Boulevard, owner is the Bishop of Oakland)
9	D-23	Indian Residence Adobes Site-south side Washington Boulevard (address may be McIvor Hardware, 43350 Ellsworth Street or 7-11, 190 Washington Boulevard)
10	E-27	Ohlone Indian Burial Grounds (CI) (Washington Boulevard & PPP)
	E-45	Petroglyphs and Mortar-beds, Vieux-Ladiges site, Vargas Road

Mexican-Spanish

11	D- 1	Mission San Jose de Guadelupe,(CI,NR) (43148 Mission Boulevard)

(Only the church floor has a designation at present)

12	D-31	Mission Adobe Monastery wing, CI,NR
13	D- 2	St. Joseph's Catholic Cemetery, CI, NR, Mission Boulevard
14	D- 6	Palm Trees on Mission Boulevard in front of Monastery Wing, CI, NR
15	D-22	J.J. Vallejo Adobe site (CI) (Olive Hyde Art Center, 123 Washington Boulevard)
16	D-28	Washington Hotel Adobe site - Solon property, west side Mission Blvd.

Americanization

17	"D"	Mission San Jose old town Vallejo Street complex (CI)
18	D-19	Columbet Hotel - Red House, west side
19	D-20	Marshall-Scott General Store, (Duberg's)

20	D-21	Steinmetz Harness Shop (second)
21	D-30	North Hotel and Priest's home site
22	D-34	Arena site (bull, bear, cock fights)
23	D-31	Smith's Store (in old monastery wing) (43300 M.Blvd.)
24	D-24	Baker Livery Stable
25	D-25	Sunderer Bootshop and Wells Fargo Station
26	D-32	Washington Hotel (second)
27	D-33	Brown's Barber Shop, 433346/52 Mission Boulevard
28	D-26	Ehrman's General Store, 43360 Mission Boulevard
29	D-27	Solon Building, 43387 Mission Boulevard
30	D-29	First Mission Store, 43300 Mission Boulevard
31	D-12	Society of I.D.E.S. building site (Irmandade do Divino Espirito Santo - Portuguese Holy Ghost celebrations), 43433 Ellsworth St.

Industrial

32	D- 3	Mission Mill (first) (2 locations, includes flume way), 43164 Mission Boulevard, owner Bishop of Oakland)
33	C-14	Los Amigos Winery site (Werner-Grau)(Maycock) (I-680)
34	D-17	Los Cerritos Winery Site (Salazar-Roberts) (43623 Tonica Road and 1000 Pine St. for city-owned creek ravine parcel)
35	E-23	Stanford Winery (CI, CL) (2015 Stanford Avenue)

Church, School, Government

36	E-26	St. Joseph's Catholic Cemetery, Durham and Mission location
37	D- 1	St. Joseph's Catholic Church (1869 structure removed to San Mateo)
38	GPA87	Old Mission San Jose School/First City Hall, 43551 Mission Boulevard
39	C-11	Washington College site, Christian College, Curtner Seminary, Anderson Military Academy, Giles home site (CI) 41400 Timbercreek Terrace, original address 3306 Driscoll Road

Residential

40	E-49	Blaisdell-Slayton-Mackintosh home (CI) 40572 Canyon Heights Drive
41	C-10	Captain Bond home (W. Y. Horner) 2800 Driscoll Road
42	D- 5 D- 7	Original Gallegos estate and grounds (CI), same site as Palmdale and E.L. Beard Estate and Nursery; Sisters of the Holy Family, 43151 Mission Boulevard
43	D-16	McIvor Estate-Linda Vista, 43600 Mission Boulevard (Ohlone College)
44	D-15	Palmer/Avers/Mills/Huddleson home and estate, 43568 Mission Boulevard (Ohlone College)
45	E-48	Simeon Stivers home site, 39500 Mission Boulevard
46	E-47	Frank Rose - Murphy home 39590 Mission Boulevard/ 39501 Canyon Hts
47		Priest's house (1890 Rectory), moved from Mission site to 152 Anza Street

Planted Alamedas:

48	D 8	Olive trees, Dominican Convent Grounds
49	D 9	Olive trees, Starr Street and Olive Avenue (Palmdale estate)
50	D14	Olive trees, Witherly to Hunter Lane (Palmer Estate) (replaced)
51	D10	Palm trees, Junipero Serra Center
52	D 5	Palm trees, Mission Creek (Gallegos Estate)
53	D 6	Palm trees, Mission Boulevard (Palmdale)
54	C13	Palm trees, Washington Boulevard and Olive Avenue

1990 Map ID	Prior Map ID	NILES

Natural Features

1	E 1	Alameda Creek original channel and rancho boundary
2	A34	Alameda Creek Environs in vicinity of Gravel Pits (Alameda Creek Quarries Regional Recreation Area, Niles Community Park, Ford and Bunting Pond areas south of Alameda Creek)
3	A 1	Belvoir Springs (warm springs) (36990 Mission Boulevard)
4	E46	Morrison Canyon, north side
5	E43	Niles Canyon

Ohlone

No primary designations other than those implied by the Niles Canyon, Morrison Canyon and Alameda Creek designations (ie. trail, village, hill area sites)

Mexican and Spanish

6	A 2	Vallejo Adobe (CI, NR) (36601 Niles Boulevard) COF
7	A 9	Vallejo Mills, (Vallejo Historical Park) (CI, CL) (37880 Mission Boulevard)

Americanization, Early Settlement

8	"A"	Gopher Town - Vallejo Mills, (Vallejo Street, Niles Boulevard)
9	A 1	Hotel Belvoir (36990 Mission Boulevard)
10	A 8	Niles Courthouse and Jail (377... Second Street at I Street)
11	A 6	Mayhew-Maria home site (37487 Mission Boulevard)
12	A10	Ellsworth first home (include palm trees) (38416 Mission Boulevard)

Industry and Agriculture

13	A10	Gravel Pits (in Niles Community Park)
14	A 7	Niles Railroad Depot (original site, 37514 Niles Boulevard)
15	A7A	Niles Railroad Depot (original structure, 36995 Mission Boulevard)
16	E44	Old Railroad Tunnel, Niles Canyon (built after 1914)
17	A 3	Rock Nursery #1 (California Nursery Historic Park) (36363, 36501, 36611, 36633, 36655 Niles Boulevard)
17	3	California Nursery #2 Roeding (") (also landmark trees in vicinity)
18	A 4	Essanay Film Studio site (CI) 37200 block, Niles Boulevard)
19	A 5	Essanay Movie Cottages, Second Street and School Street (CI) (37230, 37268, 37308, 378340, 37354, 37374 Second Street

NORTHERN PLAIN

1990 Map ID	Prior Map ID	
Ohlone		
1	E 7	Shellmounds in Patterson Ranch area near Chochenyo Trail, (EBRPD, PG&E, ACFCWCD)
Americanization		
2	E 6	George Patterson home, 34600 Ardenwood Blvd. (CI, NR) The state and federal designations refer to the entire Ardenwood estate.
3	E 2	Harvey home (Sylvester Harvey Park) (CI & EN) (32958 Alvarado Road)
4	E10	Salt ponds (west of Coyote Hills)

WARM SPRING

1990 Map ID	Prior Map ID	
Natural Features		
1	E19	Agua Fria (ACFC)
2	E24	Agua Caliente (ACFC)
3	E24	Warm Springs (350 foot elevation) 2025 Stanford Terrace
Ohlone		
4	E20	Indian Village - Prior/Andrade (intersection of Curtner Road and Mission Boulevard, ACFC parcel, greenhouse lease)

Mexican-Spanish

5	E18	Galindo-Higuera Adobe (restored) (CI) (47300 Rancho Higuera)

Americanization

6	"E"	Harrisburg settlement center
7	E23	Warm Springs Hotel Complex - Stanford – Ohlone site, 2025 Stanford Terrace
8	E16	First Warm Springs School (1864) (1967 map shows it on east side of Warm Springs Boulevard, it may have been the lot opposite 47370 Warm Springs Boulevard)
9	E17	Curtner Home - Mansion, Las Tularcitos Rancho, Craig Rest Home, (47588 - 47630 Wabana Common)

Appendix II

Excerpts from Scenic Highway and Route Element Regarding Landscaping Plans

NOTE: This document is reproduced here in order to provide information regarding theme trees along scenic routes in the City. Other information in this document may be outdated and will be revised as necessary as a part of General Plan implementation.

Community Development Department

January 1975

City of Fremont

Amended March 1991

I-880

Fact Sheet

Limits of Route:
Northern city limits to southern city limits.

Length:
Approximately 12.5 miles.

Type and Width:
State Freeway – six lanes.

Traffic Volume:
84,000 vehicles per day (peak month count).

Other Scenic Designations:
Alameda County Scenic Route.

Existing Land Uses:
Residential, agricultural and industrial.

Planned Land Uses:
1. Major shopping center in Newark.
2. Crocker Industrial Park.
3. Southern Pacific Industrial Park.

Topography:
Relatively flat.

Landscaping Theme:
Lombardy Poplar (populas nigra "italia") as a unifying tree element. See discussion of Exhibit 6-C.

Outstanding Features:
Occasional vistas of Mission Peak, Coyote Hills, Ardenwood and Alameda Creek. The vista of the General Motors plant as a significant architectural form.

Disruptive Elements:
Unsightly industrial storage yards and buildings.

Mission Freeway Interstate Route 680

Fact Sheet

Limits of Route:
Western city limits to the southern city limits.

Length:
7.6 miles.

Type and Width:
State Freeway – six lanes.

Traffic Volume:
From 38,500 vehicles per day at the western end to 10,000 vehicles per day at the southern end.

Other Scenic Designations:
California State Scenic Route (eligible), and Alameda County Scenic Route.

Existing Land Uses:
Some residential and industrial, but mostly undeveloped land.

Planned Land Uses:
Loop trails system in the north and middle canyon of the Mission Hills West Target Plan Area.

Topography:
Hilly in the eastern portion and flat in the southern portion.

Outstanding Features:
Almost continuous vistas of Fremont and the south bay region.

Disruptive Elements:
Scarred quarried hills in the section of the south ridge of the Mission Hills West Target Plan Area.

Dumbarton Freeway Route 84

Fact Sheet

Limits of Route:
I-880 Freeway to the western city limits in the Bay.

Length:
6 miles.

Type and Width:
State Parkway.

Traffic Volume:
The present Dumbarton Bridge volume is 30,000 vehicles per day.

Other Scenic Designations:
Alameda County Scenic Route Element.

Existing Land Uses:
Agricultural and salt ponds.

Planned Land Uses:
Major residential development is proposed in Newark adjacent to Ardenwood.

Topography:
Flat.

Outstanding Feature:
The only link between Fremont and the Peninsula with vistas of Ardenwood agricultural land, salt ponds and the south bay area.

Note: Street trees (Tulip trees) and backup landscape as listed in Section B begin one-quarter (1/4) mile south of the Paseo Padre/Decoto intersection and continue on to the next section.

Intersection: Paseo Padre Parkway and Tamayo – no median; street trees on west side only along with backup landscape.

Section D – Tamayo Street to Isherwood Drive

Street Trees: West Side Only – Tulip trees and backup landscape.

Median: East Side – Undeveloped.

Section E – Isherwood Drive to Thornton Avenue

Street Trees: Both East and West Sides – Designated tree (Tulip tree).

Median Landscape: Developed mixed various shrubs; Deodor Cedar trees.

Backup Landscape: Same as Section B.

Section F – Thornton Avenue to Sequoia Road

Roadsides are developed and landscaped in lawn and shrubs. Street trees are Tulip trees and Liquidambar.

Note: No street improvements except center median – plant material similar to that in Section B. No trees are planted along this stretch of roadway. Both sides are currently in gravel pit operations.

Section G – Sequoia Road to Peralta Boulevard

Street Trees: East Side – Fully planted with designated street tree – Tulip tree; West Side – Also fully developed in street tree and landscape plantings.

Median Landscape: Fully developed; Trees – Eucalyptus, Canary Island Pine and Moraine Ash; Shrubs – Junipers and Pink Indian Hawthorne; Groundcover – Iceplant and Hypericum.

Section H – Eggers Drive to Country Drive

Street Trees: Mixed varieties – Myoporum, Magnolia, Holly Oak, and California Pepper.

Section I – Country Drive to Mowry Avenue

Street Trees: West Side Only – Tulip trees.

Median Landscape: Developed with mixed shrubs, Tulip trees, Plum trees, Canary Island Pines.

Paseo Padre Parkway

Fact Sheet

Limits of Route:

Existing: From Fremont Boulevard to Peralta Boulevard.

Martha Avenue to Washington Boulevard.

Proposed: Peralta Boulevard to Martha Avenue and Washington Boulevard to Interstate I-880, Fremont Boulevard to proposed Dumbarton approach freeway.

Length:

Existing: 10.0 miles.

Proposed: Exact alignment unknown.

Type and Width:
Parkway; 120 foot right-of-way (four lanes and median).

Traffic Volume:
From 45,000 vehicles per day at Stevenson Boulevard to 4,700 vehicles per day at Fremont Boulevard.

Other Scenic Designations:
Alameda County Scenic Route.

Existing Land Uses:
Residential and commercial.

Planned Land Uses:
1. Alameda County Court House.
2. Continuing planning for the Quarry Park.

Topography:
Primarily flat at the existing section and the section proposed to go through the Northern Plain; and hilly for the section south of Washington Boulevard.

Landscaping Theme:
Tulip tree and Holly Oak; no new tulip trees to be planted, replace with Sycamore or Liquidambar.

Outstanding Features:
Vistas of hills, Mission Peak and the quarry water features.

Disruptive Elements:
Some parking lots could benefit from additional screening.

Landscaping

Section A – Fremont Boulevard to Langhorn

Street Trees: North Side – open field – no trees; South Side – Northgate Apartments are landscaped with Monterey Pines which are serving as street trees. North side developed with church and Northgate Community Park.

Note: This portion of Paseo Padre Parkway is only partially developed. Street improvements are only on one side. As this area is developed according to the General Plan, so will the landscape and street tree installations. Medians now exist with mixed various shrubs and trees – Liquidambar and flowering plum.

One-quarter (1/4) mile east of Fremont Boulevard, street landscaping begins on the south side.

Designated Tree: Tulip Tree.

Backup Landscaping: Groundcover – Chip Seal; Shrubs – Pink Indian Hawthorne and Viburnum.

Section B – Langhorn Drive to Decoto Road

Street Trees: North and South Sides – Tulip trees.

Median Landscape: Developed with mixed various shrubs and trees – Liquidambar and Canary Island Pines.

Backup Landscape: Trees – Allepo Pines; Shrubs – Junipers and Vibernum; Groundcover – Gazania and Hypericum.

Intersection Landscape: None existing.

Section C – Decoto Road to Tamayo Street

Street Trees: Non-existent.

Median Landscape: Undeveloped.

Section J – Mowry Avenue to Walnut Avenue

Street Trees: East Side – Magnolia full length of Fashion Center shopping mall; West Side – Open agriculture fields.

Median Planting: Heavily planted; Trees – Eucalyptus and Canary Island Pine; Shrubs – Hakea and Agapanthas (Lily of the Nile).

Section K – Walnut Avenue to Stevenson Boulevard

Street Trees: Open agriculture fields both sides; Trees – some Tulip trees, most mixed variety on private business property.

Median Landscape: Planted similar to Section J.

Designated Street Tree: Tulip tree.

Section L – Stevenson Boulevard to Grimmer Boulevard

Street Trees: Holly Oak (exists south of Mission View Drive on both sides of Paseo Padre Parkway); Central Park is not fronted with street trees.

Median Landscape: Trees – Pistacia, Pine, Victorian Box, Olive and Redwood; Shrubs – Junipers and Lily of the Nile; Groundcover – No lawn in center divider.

Section M – Grimmer Boulevard to Driscoll Road

Street Trees: None; One-quarter (1/4) miles north of this intersection Tulip trees are on the west side – mixed types on the east side. New backup landscaping next to new homes at Paseo Padre Parkway and Hancock on west side and Paseo Padre Parkway and Shadow Brook Common.

Median Landscape: Heavily planted with mixed shrubs and groundcover; Shrubs – Junipers and Pink Indian Hawthorne; Groundcover – Hypericum; Mixed variety of trees.

Section N – Driscoll Road to Olive Avenue

Street Tree: Predominantly Holly Oak.

Median Landscape: Mixed plantings – informal design; Trees – Pepper, Canary Island Pine and Olive.

Section O – Olive Avenue to Washington Boulevard

Street Trees: None; Designated – Holly Oak.

Median Landscape: Trees – Olive trees; Groundcover – No groundcover or lawn, only trees.

Summary: There are several different landscape situations that exist along Paseo Padre Parkway. Different species of trees and landscape shrubs are used to accomplish certain effects. Since some areas are already established, they should be maintained as is rather than completely changed to meet a new design concept.

A certain amount of flexibility must be maintained in street tree and landscape material selection and design because of varying site conditions. Due to the existing variety in soil types, physical surroundings and micro climates, the use and design of plant material will vary. Nevertheless, it is possible through design to develop a general theme throughout a scenic route system within the city.

Thematic Trees

Tulip Tree – Fremont Boulevard to Stevenson Boulevard

Holly Oak – Stevenson Boulevard to Washington Boulevard

Tulip Tree – Durham Road to Curtner Road

Backup Landscaping of mixed shrubs, Canary Island Pines and Tulip trees – Durham Road to Mission Boulevard.

Center Divider Landscaping of mixed variety shrubs, Canary Island Pines and Sycamore trees – Mission Boulevard to Curtner Road.

Center Divider fully developed with a mixed variety of shrubs and trees (Canary Island Pine and Bradford Pears) – Fremont Boulevard west to Highway 84.

Mission Boulevard

Fact Sheet

Limits of Route:
Northern city limits to Interstate I-880.

Length:
10 miles.

Type and Width:
Thoroughfare; 104 foot right-of-way (four lanes with median) to 168 foot wide right-of-way (four lanes with median and frontage road).

Traffic Volume:
From 27,000 vehicles per day at Mowry to 4,100 vehicles per day at Durham Road.

Other Scenic Designations:
Alameda County Scenic Route.

Existing Land Uses:
Primarily residential with commercial uses at Niles and Mission San Jose. Undeveloped agricultural lands south of Mission San Jose.

Topography:
Flat and slightly hilly.

Landscaping Theme:
Moraine Ash, Liquidambar, Palm and Olive trees.

Outstanding Features:
1. Continuous awareness that the route is in the foothill range.
2. Mission San Jose and Niles Historical areas.

Disruptive Elements:
1. Power lines.
2. Scarred quarry hills north of Niles Canyon Road.

Landscaping

Section A – Union City Boundary Line to Sullivan Underpass

Street Trees: West Side – City Boundary to King Avenue – Olives. No street improvements – areas are open agricultural areas.

Section B – Sullivan Underpass to Niles Boulevard

Street Trees: West Side – From Sullivan Underpass to Mayhews Road – Olive trees. No street improvements – areas are mostly open agricultural fields.

Section C – Niles Boulevard to Stevenson Boulevard

Note: Open fields and unimproved areas exist with no landscaping.

Section D – Stevenson Boulevard to Las Palmas

Street Trees: East Side – Liquidambar begins at Kimber Farms.

Backup Landscape: Mixed types – Eucalyptus, Pines, Palms and Flowering Plum.

Section E – Las Palmas to Driscoll Road

Street Trees: East Side – Liquidambar; West Side – Palms.

Backup Landscape: Trees – Liquidambar; Shrubs – Abelia, Xylosma, and Photinia; Groundcover – Gazania and Hans Ivy.

Section F – Driscoll Road to Palm Avenue

Street Trees: East Side – Open agriculture land; West Side Front of Mission High School – Carob tree.

Section G – Palm Avenue to San Dimas

Street Trees: East Side – Open space, not developed; West Side – Carob trees and Sweet Gum.

Section H – San Dimas to Washington Boulevard

Street Trees: Olive and Ash alternate sporadically up to Mill Creek Road; West Side – Palms; East Side (from Telles Lane) – Palms.

Section I – Downtown Mission San Jose

Street Trees: Mayten trees have been planted on the west side of the street; East Side – Historic Olives planted along the east side to Hunter Lane; Open space, primarily agricultural land dominates to Warm Springs Boulevard.

Summary: There are several different landscape situations existing along Mission Boulevard. Several different species of trees have been planted in the past. Since these areas are fairly well established, they should be maintained rather than completely changed to meet new design plans. As mentioned in Summaries of Stevenson Boulevard and Paseo Padre Parkway, a certain amount of flexibility must be maintained in the selection of plant material. Maintaining continuity of design does not necessaruily mean using a specific and limited variety of plant materials.

Thematic Trees

Moraine Ash – Union City Boundary Line to Stevenson Boulevard

Liquidambar – Stevenson Boulevard to Mill Creek Road

Palm – Mill Creek Road to Washington Boulevard

Olive – Washington Boulevard to I-880.

Center divider fully landscaped from Union City border to the Interstate 680 overpass, also from Durham Road to South Grimmer Boulevard.

Fremont Boulevard

Fact Sheet

Limits of Route:
Northern city limits to Warm Springs Boulevard.

Length:
8.7 miles.

Type and Width:
Thoroughfare from 104 foot wide right-of-way (four lanes with median) to 200 foot wide right-of-way (six lanes with median).

Traffic Volume:
From 44,000 vehicles per day at Stevenson Boulevard to 12,000 vehicles per day at Warm Springs Boulevard.

Other Scenic Designations:
Alameda County Scenic Route.

Existing Land Uses:
Primarily residential and commercial.

Topography:
Flat.

Landscaping Theme:
Tulip tree and Victoria Box; Palm trees in Irvington area.

Outstanding Features:
Occasional vista of hills. Axial vista to hill ridges of Mission West Target Plan 1 area from Centerville to Irvington.

Landscaping

Section A – Lake Arrowhead Avenue to Interstate I-880

Backup lot with large greenbelt designed, turf, some shrubs, Poplar trees, Pine and Pepper trees.

Street Trees: Backup landscape trees serve as street trees – east side only, Eucalyptus and Pines.

Section B – Interstate I-880 to Darwin Drive

Median Landscape: Center divider with lawn, shrubs and trees.

Section C – Darwin Drive to Decoto Road

Note: Area is only partially developed – Tulip trees on east side only; center divider with lawn, shrubs and trees.

Section D – Decoto Road to Tamayo Street

Street Trees: Open space both sides of street – undeveloped.

Median Landscape: Center divider with lawn, shrubs and trees.

Section E – Tamayo Street to Nicolet Avenue

Street Trees: East side – Fronting on shopping center, Holly Oak and Elm trees.

Median Landscape: Center divider with lawn, shrubs and trees – Tulip and Canary Island Pine.

Section F – Nicolet Avenue to Alder Avenue

Street Trees: East Side – Tulip trees; West Side – Open agricultural land.

Median Landscape: Center divider with lawn, shrubs and Tulip and Canary Island Pine trees.

Section G – Alder Avenue to Thornton Avenue

Street Trees: West Side – Glossy Privet/Holly Oak; East Side – Mixed types.

Median Landscape: Trees – Mixed types; Shrubs – Abelia; Groundcover – Lawn.

Section H – Thornton Avenue to Peralta Boulevard

Street Trees: Both Sides – Victorian Box.

Section I – Peralta Boulevard to Central Avenue

Street Trees: Both Sides – Tulip trees fade into Victorian Box trees through the business district.

Median Landscape: No median through the business district.

Section J – Central Avenue to Eggers Drive

Street Trees: Predominantly Tulip trees (both sides).

Median Landscape: Trees – Mixed types; Shrubs – Pink Indian Hawthorne & Lily of the Nile; Groundcover – Gazania.

Section K – Eggers Drive to Country Drive

Street Trees: East Side Only – Holly Oak along front of Washington High School.

Median Landscape: Center divider with lawn, shrubs and a mixed variety of trees.

Section L – Country Drive to Monroe Avenue

Note: Both sides developed – Tulip trees.

Median Landscape: Center divider with lawn, shrubs and a mixed variety of trees.

Section M – Monroe Avenue to Mowry Avenue

Street Trees: Both sides – Tulip trees.

Median Landscape: Center divider with lawn, shrubs and a mixed variety of trees.

Section N – Mowry Avenue to Sundale Drive

Note: Both sides of the street are open and undeveloped with the exception of shopping centers which have a variety of mixed plant material planted in front along the street. Oak trees.

Median Landscape: Center divider presently with no plant material, no automatic irrigation.

Section O – Sundale Drive to Stevenson Boulevard

Street Trees: East Side – Tulip tree; West Side – Holly Oak.

Median Landscape: Mixed varieties; Shrubs – Pink Indian Hawthorne and Lily of the Nile; and lawn.

Section P – Stevenson Boulevard to Grimmer Boulevard

Street Trees: Predominantly Modesto Ash.

Median Landscape: Center divider with lawn; Trees – Mayten tree; Shrubs – Rosemary and Lily of the Nile; Groundcover – Iceplant.

Section Q – Grimmer Boulevard to Washington Boulevard

Street Trees: Holly Oak.

Median Landscape: No trees in median; Shrubs – Pink Indian Hawthorne and Lily of the Nile; only about 100 feet south of Grimmer Boulevard.

Section R – Washington Boulevard to Blacow Road

Street Trees: Sparce plantings – mixed varieties of Holly Oak and Brazilian Pepper.

Median Landscape: No median or center divider.

Section S – Blacow Road to Interstate I-880

Note: No landscaping – much of this area is in agricultural pasture land. Sparce plantings of horsetail trees (Casaurina) do occur.

Median Landscape: Unlandscaped center divider with gravel finish only; no plant material.

Summary: In the business districts, Victorian Box trees will be used to permit commercial sign exposure.

Thematic Trees

Tulip trees as street trees.

Victorian Box trees in commercial areas.

From Interstate I-880 to Lakeview Boulevard – Industrial Park area almost fully developed. Mixed variety of trees in mounds of grass – Pines, Plums, Alders, Peppers, etc.

Warm Springs Boulevard

Fact Sheet

Limits of Route:
From Fremont Boulevard to the southern city limits.

Length:
4.1 miles.

Type and Width:
Industrial thoroughfare; 68 foot wide right-of-way (four lanes).

Traffic Volume:
9,600 vehicles per day at Fremont Boulevard to 6,500 vehicles per day at the southern city limits.

Existing Land Uses:
Industrial and undeveloped.

Planned Land Uses:
Crocker Industrial Park.

Topography:
Flat.

Landscaping Theme:
Pistacia tree and Raywood Ash.

Outstanding Features:
1. Rural quality.
2. Vista of hills and the Bay Region.

Disruptive Features:
Power lines.

Landscaping

Section T – Fremont Boulevard to Mission Boulevard

Street Trees: Trees of mixed variety.

Section U – Mission Boulevard to Lippert Avenue

Street Trees: Pistacia trees – both sides fully developed.

Median Landscape: Center divider fully developed with mixed variety of shrubs and trees.

Section V – Lippert Avenue to Gable Drive

Street Trees: Both sides fully developed.

Median Landscape: Center divider fully developed with mixed variety of shrubs and trees.

Backup Landscaping: Trees – Olive; Shrubs – Rosemary.

Section W – Gable Drive to Camphor Avenue

Street Trees: Both sides fully developed

Median Landscape: Center divider fully developed with mixed variety of shrubs and trees.

Section X – Camphor Avenue to Scott Creek Road

Street Trees: Both sides fully developed with a mixed variety of trees.

Median Landscape: Center divider fully developed with mixed variety of shrubs and trees.

Designated Tree: Pistacia Chinensis

Summary: Most of the land fronting on Warm Springs Boulevard from Fremont Boulevard to Scott Creek Road and the Milpitas boundary is primarily agricultural in nature. As light industry increases, so will street improvements and the development of a landscape theme. Pistacia Chinensis is the designated tree for this boulevard.

Thematic Tree

Pistacia Chinensis

Washington Boulevard

Fact Sheet

Limits of Route:
Fremont Boulevard to Mission Boulevard.

Length:
2.3 miles.

Type and Width:
Thoroughfare; 104 foot wide right-of-way (four lanes with median).

Traffic Volume:
24,000 vehicles per day at Fremont Boulevard to 4,700 vehicles per day at Mission Boulevard.

Existing Land Uses:
Commercial from Fremont Boulevard to Osgood Road and at Mission Boulevard; Residential elsewhere.

Planned Land Uses:
1. Residential development of the old Ohlone College campus.
2. Condominium development at the Giles Estate at Driscoll Road.

Topography:
Slightly hilly.

Landscaping Theme:
Olive/Liquidambar; limited use of Olive trees.

Outstanding Features:
View of Mission San Jose.

Landscaping

Section A – Fremont Boulevard to Olive Avenue

Street Trees: None – Mixed trees exist along undeveloped portions.

Section B – Olive Avenue to Palm Avenue

Street Trees: Mixed types – No organized development. Palm trees dominate the sky line.

Setion C – Palm Avenue to Washington Commom

Street Trees: South Side – Modesto Ash and Olive; North Side – Olive.

Section D – Washington Common to Jerome Avenue

Street Trees: Mixed types – No street improvement.

Section E – Jerome Avenue to Bryant Street

Street Trees: South Side – Olive trees; North Side – Mixed types.

Section F – Bryant Street to Mission Boulevard

Street Trees: None – No street improvements; old California Peppers in front of church property.

Thematic Tree

Olive Tree

Mowry Avenue

(including 3,500 foot portion previously known as Peralta Boulevard)

Fact Sheet

Limits of Route:
From Interstate I-880 to Mission Boulevard.

Length:
Approximately 3.7 miles.

Type and Width:
Thoroughfare; varies from 104 foot right-of-way (four lanes with median) to 168 foot right-of-way (four lanes with median and frontage road).

Traffic Volume:
From 36,000 vehicles per day at Nimitz Freeway to 14,000 vehicles per day at Peralta Boulevard.

Existing Land Uses:
Commercial to Blacow Road, Residential to Argonaut Way, and Commercial/ Residential to Mission Boulevard.

Topography:
Flat.

Landscaping Theme:
Sweet Gum (Liquidambar).

Outstanding Features:
1. Eastbound, continuous vista of hills.
2. Occasional views of Mission Peak, Central Park and Shinn Park.
3. View of underpass at Overacker and BART.

Disruptive Elements:
Some parking lots could benefit from additional screening.

Landscaping

Section A – Interstate I-880 to Blacow Road

Street Trees: North Side – None existing up to Blacow Road; South Side – Liquidambar (Sweet Gum) planted from freeway exit ramp to one block east of Farwell Drive. GEMCO Shopping Center frontage has a mixed variety of trees which serve as a screen between the avenue and the parking lot. Elms and pines dominate the area.

Both sides developed; center divider developed; mixed variety shrubs and trees; no lawns in this section.

Designated Tree: Liquidambar.

Note: Because of the shopping center concept of development and the fact that all maintenance of planted areas are the responsibility of the shopping center, no street tree installations were required. The GEMCO landscape design was completed by the developer before the City had a chance to enforce the use of specific varieties of street trees.

Section B – Blacow Road to Sutter Drive

Street Trees: North Side – Mixed planting (Liquidambar, Eucalyptus, Canary Island Pine); South Side – Eucalyptus, Canary Island Pine.

Designated Tree: Liquidambar.

Frontage Road Trees: Flowering Plum.

Median Landscape: Fully developed center divider – mixed shrubs, trees and lawns.

Intersection Landscaping (Mowry and Sutter): Aleppo Pines and Junipers.

Setion C – Sutter Drive to Fremont Boulevard

Street Trees: North Side – Eucalyptus and Canary Island Pines; South Side – Flowering Plum and Canary Island Pine changing to Liquidambar just before Fremont Boulevard.

Median Landscape: Fully developed center divider – mixed shrubs, trees and lawn.

Frontage Road: North Side – Carob trees; South Side – Holly Oaks.

Intersection Landscape (Argonaut and Mowry): Aleppo Pines and Junipers northwest corner only.

Section D – Fremont Boulevard to Civic Center Drive

Street Trees: North Side – Primarily Liquidambar; South Side – Liquidambar.

Median Landscape: Trees – Canary Island Pine, Eucalyptus, Liquidambar; Shrubs – Junipers, Jasmine, Lily of the Nile.

Designated Tree: Liquidambar.

Section E – Civic Center Drive to Peralta Boulevard

Street Trees: North and South Sides – Liquidambar planted up to BART overpass.

Note: From BART overpass to Peralta Boulevard is presently undeveloped and in agriculture. Future development will include continuation of Liquidambar trees as main street element to Peralta Boulevard.

New center divider from Peralta to Overacker – Mixed shrubs and trees; no lawns.

At Peralta Boulevard and Mowry Avenue intersection – Two large triangled traffic islands with lawns, shrubs and trees.

Thematic Tree

Sweet Gum (Liquidambar) – Entire length of Mowry Avenue

Stevenson Boulevard

Fact Sheet

Limits of Route:
From I-880 to Mission Boulevard.

Length:
Approximately 2.8 miles.

Type and Width:
Thoroughfare; varies from a 104 foot wide right-of-way (four lanes with median) to a 168 foot right-of-way (four lanes with median and frontage road).

Traffic Volume:
From 22,000 vehicles per day at I-880 to 5,000 vehicles per day at Mission Boulevard.

Existing Land Uses:
Primarily residential and commercial from I-880 to Paseo Padre Parkway and the City Government Center and undeveloped land from Paseo Padre Parkway to Mission Boulevard.

Planned Land Uses:
1. California State School for the Deaf and the Blind, north of Stevenson Boulevard and east of Mission Boulevard.
2. Pedestrian mall between the City Government Center and the BART Station.

Topography:
Flat.

Landscaping Theme:
Holly Oak and Brazilian Pepper Trees.

Outstanding Features:
1. Eastbound, continuous vista of hills.
2. View of Mission Peak, Niles Canyon, Central Park and the City Government Center.

Disruptive Elements:
Some parking lots could benefit from additional screening.

Landscaping

Section A – Interstate I-880 to Blacow Road

Street Trees: North Side – Eucalyptus and Holly Oak mixed; South Side – Tulip tree; Proposed – Holly Oak.

Median Landscape: Informal Pattern Arrangement; Trees – Deodar Cedars; Shrubs – Junipers, Pink Indian Hawthorne, Photinia.

Backup Landscaped Areas: Ground Cover – Hypericum; Trees – Canary Island Pine; Shrubs – Junipers.

Note: Holly Oak or other tree species of similar size and shape are presently planted along the main drive of Stevenson Boulevard from I-880 east to Davis Street. The frontage roads have different species planted and vary from section to section. Holly Oak or Brazilian Pepper prevail and should be used as the main street tree along this length of Stevenson Boulevard.

Section B – Blacow Road to Sundale Drive

Street Trees: North Side – Holly Oak; South Side – Trees non-existent – open area; Proposed – Holly Oak.

Median Landscape: Fully developed center divider with a mixed variety of shrubs and trees; no lawns.

Intersection Landscape (Sundale and Besco): Groundcover and Aleppo Pines consistent with all intersections on this boulevard from I-880 to Fremont Boulevard.

Section C – Sundale Drive to Besco Drive

Street Trees: North Side – Brazilian Pepper; South Side – Brazilian Pepper.

Median Landscape: Fully developed center divider with a mixed variety of shrubs and trees; no lawns.

Frontage Road Trees: North Side – Ginkgo; South Side – Fruitless Mulberry.

Intersection Planting (Besco and Davis): Groundcover and Aleppo Pines.

Section D – Besco Road to Davis Street

Street Trees: North and South Sides – Brazilian Pepper changes to Holly Oak halfway to Davis Street.

Median Landscape: Fully developed center divider – mixed variety of shrubs and trees; no lawn.

Frontage Road Trees: North Side – Ginkgo trees from Section C are discontinued; South Side – Mulberrys through next Section E.

Intersection Landscape (Besco and Davis): Groundcover and Allepo Pines.

Section E – Davis Street to Fremont Boulevard

Street Trees: North Side – East of Davis-Stevenson intersection, street trees discontinue except for a 100-yard stretch in front of Apple Apartments where Liquidambar trees have been planted; South Side – Brazilian Pepper are discontinued and California Pepper is used to a point 100 yards west of the Stevenson-Fremont intersection.

Median Landscape: Fully developed center divider – mixed variety of shrubs and trees; no lawn.

Frontage Road Trees: North Side – None; South Side – Mulberry trees continue to the same point as the California Peppers within 100 yards of Fremont Boulevard.

Intersection Planting: With a gas station on one corner and a professional building on another and two vacant corner lots, there is no unifying landscape element at present.

Section F – Fremont Boulevard to Paseo Padre Parkway

Street Trees: North Side – For 200 yards east of Fremont-Stevenson Boulevard intersection, Moraine Ash are planted. Agriculture fields occupy the rest of the north side of Stevenson Boulevard up to Mission Boulevard; South Side – Moraine Ash line the street to Paseo Padre Parkway.

Median Landscape: None at present.

Section G – Paseo Padre Parkway to Police Access Road

Street Trees: North Side – Alders in front of condominiums across from City Hall; South Side – Deodar Cedars line part of Stevenson Boulevard up to civic center entrance. Alders in front of condos across from City Hall; Sycamore trees in front of new library and City Hall. Tulip trees across from library.

Median Landscape: No median exists. When developed, they should relate to the surrounding park-like setting, consistent with the median design in Section A.

Intersection Landscape: Both the intersections of Paseo Padre Parkway and Stevenson and Mission Boulevard and Stevenson are open and not fully landscaped to any degree that indicates a continuity of design.

Summary: There are several different landscape situations that exist along Stevenson Boulevard. Different species of trees and landscape shrubs are used in the situations to accomplish certain effects. Not all the varieties used are the best possible choice; however, at the time of installation, they were determined to be such. Specific street designs have already been established; they should be maintained as is, rather than changed.

A certain amount of flexibility must be maintained in street tree and landscape material selection and design because of varying site conditions. Due to the existing variety in soil types, physical surroundings and micro climates, the use and design of plant material will vary. Nevertheless, it is possible through design to develop a general theme throughout a scenic route system within the city.

Thematic Trees

Holly Oak and Moraine Ash

Holly Oak – From I-880 to Fremont Boulevard

Moraine Ash – From Fremont Boulevard to Mission Boulevard

FREMONT GENERAL PLAN

BACKGROUND REPORT:

HOUSING

Amended 12/8/92

by
City of Fremont Community Development Department

Table of Contents

Amended 12/8/92

CHAPTER 4

HOUSING BACKGROUND REPORT

INTRODUCTION

This report presents background data and other information documenting existing housing conditions and expected housing needs in Fremont. This Housing Background Report along with the Housing Chapter of the Fremont General Plan constitute the Housing Element of the General Plan as required by State law (Government Code, Title 7, Division 1, Chapter 3, Article 10.6, Section 65580-65589.8). Those requirements of State Housing Element law related to energy conservation are located in the energy resources section of the Natural Resources Chapter.

Citizen Participation. The Housing Chapter of the General Plan is based on work done by the General Plan Citizens Advisory Committee (CAC), modified by the Planning Commission and City Council. The 25 member CAC was appointed in April, 1989 with twenty-three members seeing the project to completion in November, 1989. Over 70,000 applications for membership on the CAC were sent to all households and businesses in Fremont and more than 300 applications were completed and returned. All applications were reviewed by the Council and selection was based upon multiple criteria.

The men and women selected were representative of the diversity of Fremont. The CAC divided into four subcommittees to review specific areas of concern. One of the subcommittees focused on housing. The subcommittee spent several weeks becoming informed regarding housing issues, receiving testimony from several housing experts including representatives of the development community and those concerned with providing assisted housing. The Housing Subcommittee made recommendations regarding goals, objectives and programs to the Citizens Advisory Committee which, with very little change, included them in the General Plan "Concept Report." The Planning Commission and City Council considered and incorporated most of the Concept Report's recommendations regarding housing in the Housing and Land Use Chapters of this General Plan.

Because the Housing Element is being updated along with the General Plan as a whole, it has received a great deal of attention throughout the community. The basic goals and objectives of the General Plan (including the Housing Element) were published in an insert of the Argus newspaper and distributed widely throughout the community. Notices regarding the meetings on the Element have been distributed through the City's Housing Department which maintains contact with virtually every organization in the city concerned with housing issues.

Report Organization. This report is divided into three sections. Section H-1 documents existing housing conditions, including an assessment and inventory of housing conditions and needs and includes the following information:

- Current population and employment
- Number of housing units by type
- Existing housing stock conditions
- Evidence of overcrowding
- Special housing needs of large families, the elderly, the disabled and single parent households
- Housing needs for all income levels
- Share of regional housing
- An assessment of the cost of housing compared to the ability of households to pay.

Section H-2 evaluates the City's progress in achieving the objectives established in its previous Housing Element (1985). It also includes an evaluation of the City's effectiveness in implementing the programs identified in the 1985 element.

Section H-3 examines the future of Fremont housing including the following information:

- Population and employment trends;
- Inventory of land, including vacant sites, sites with potential for redevelopment. Also, the zoning and public services in relation to these sites;
- An evaluation of the potential for losing existing low income housing during the next 10 years;
- Potential and actual governmental constraints on meeting housing needs including land use controls; building codes and enforcement, fees and other exactions, local processing permit procedures;
- Non-governmental constraints, including the availability of financing, the price of land and the cost of construction.

The Housing Chapter of the General Plan summarizes the above information and then presents the City's goals and quantified objectives. The Chapter also contains a time frame for implementation measures and identifies the responsible agency.

Consistency with the General Plan

Because the Housing Chapter and Background Report are being prepared at the same time as a full comprehensive update of the Fremont General Plan, consistency with other General Plan sections is required by State law and is being implemented by incorporating appropriate related policies in other sections, and through cross referencing policies within the General Plan.

H-1 EXISTING CONDITIONS

This section of the Housing Background Report presents background on existing households, housing and City housing program. It includes four sections:

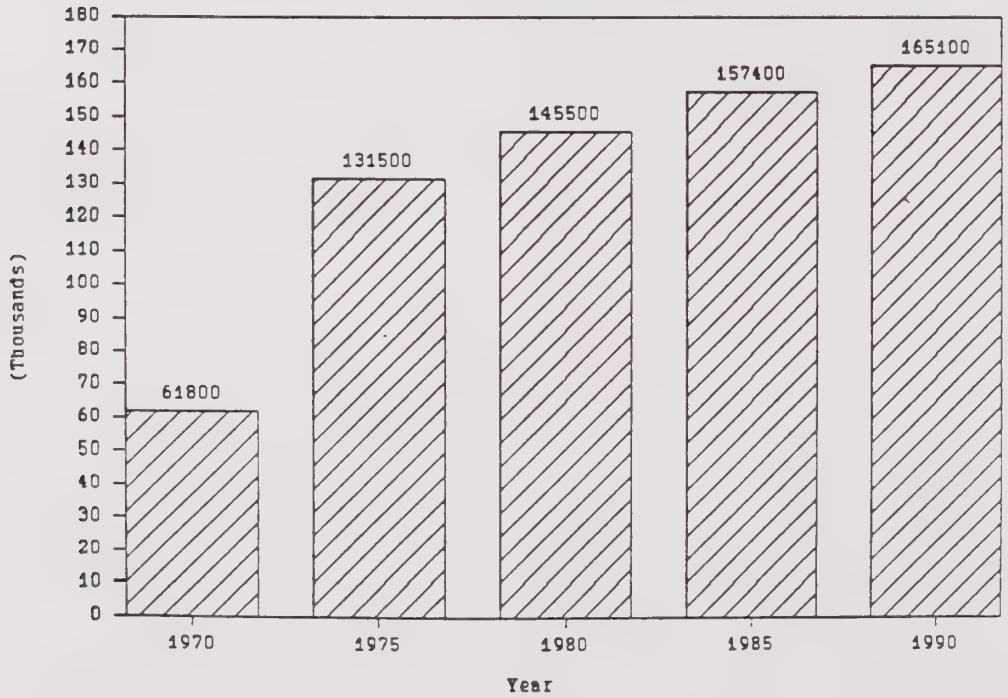
- H-1.1: Profile of population and households
- H-1.2: Households with special housing needs
- H-1.3: Housing Supply
- H-1.4: Housing Cost and Affordability

H-1.1 PROFILE OF FREMONT'S POPULATION AND HOUSEHOLDS

Population

The California State Department of Finance (DOF) estimates the city's 1989 population to be 168,998 residents [1], an addition of 37,053 new residents since 1980. The Association of Bay Area Governments estimates that the number of households in Fremont has grown by 39 percent between 1980 and 1990, as compared to a regional growth of 16 percent.

Figure H-1.1 Population 1970-1990

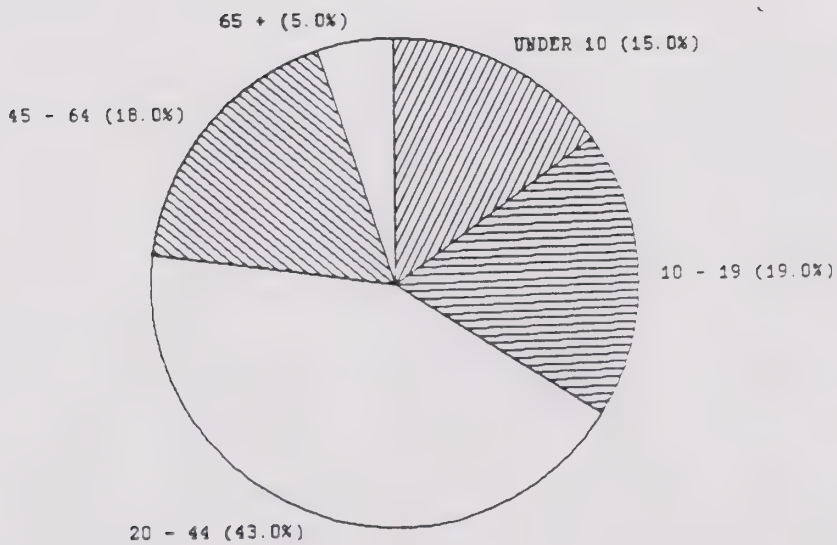


Age and Gender

In 1980 [2], the city's population was almost evenly divided between women and men. For those 65 years of age or older, the ratio of women to men was higher.

Fremont is a relatively young community in terms of the average age of its population and the city's age distribution. In 1980, Fremont residents had an average age of 28.2, slightly under the state average of 29.9 and considerably below the regional average of 31.2 (See Figure H-1.2). Those over 65 were only 5 percent of Fremont's population compared to the region where those over 65 constitute 10 percent of the population.

Figure H-1.2 Age Distribution; 1980

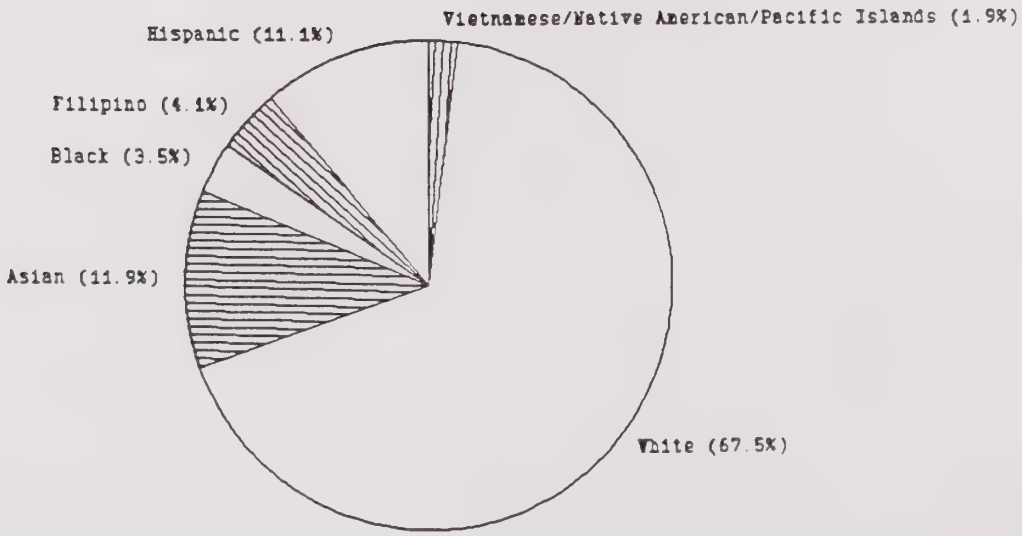


Racial and Ethnic Composition

According to the 1980 census 84 percent of the residents of Fremont classified themselves as white (14 percent of whom were of Spanish ancestry); 7 percent as Asian-American; 2.5 percent as Black persons; and slightly less than one percent as Native American (Figure H-1.3). This was a significant increase in the proportion of non-white residents from 1970 when only 2 percent of the population identified themselves as non-white.

Updated census information regarding ethnic composition will be unavailable until after 1990 [2]; however, the Fremont Unified School District performs an annual student ethnic profile. Although the school age population does not fully represent the community at large, the November 1989 study indicates a continuing shift in the ethnic makeup of the city (See Figure H-1.3).

Figure H-1.3 Racial and Ethnic Composition of Population
A: 1980 Census; B: Fremont Unified School District Student Population, 1989



Households

A "household" is composed of persons who occupy a housing unit [3]. The city was estimated to have 59,238 households in 1989 [1]. Fremont's growth has been remarkably constant over the last two decades. Between 1980 and 1989, the city is estimated to have added 16,194 new households, or about 1800 per year. Between 1970 and 1980, the city grew by an average rate of about 1760 per year (Figure H-1.4). Fremont contains about 3 percent of the nine-county Bay Area's total 2,207,458 households [4].

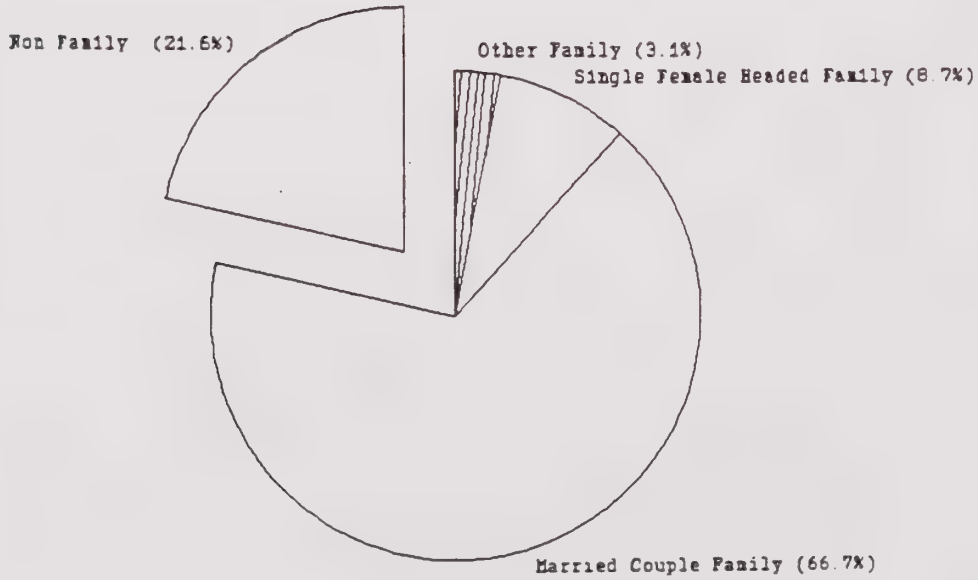
Figure H-1.4 Households, 1970 - 1989

Type of Households

In 1980, there were 44,125 households in Fremont containing a total of 130,689 individuals. Of this total, 34,612 or 78 percent, were family households and 9,513, or 22 percent, were non-family households consisting of cohabitating unrelated individuals or individuals residing alone. There were also 1,256 residents residing in group facilities or institutions (See Figure H-1.5).

Of the city's households, 16,756 (38 percent of all households, 48 percent of family households), were defined as traditional, nuclear families; that is, households headed by married husband-wife couples and including children under the age of 18. Another 3,817 family households (8.7 percent of all households) were headed by single women.

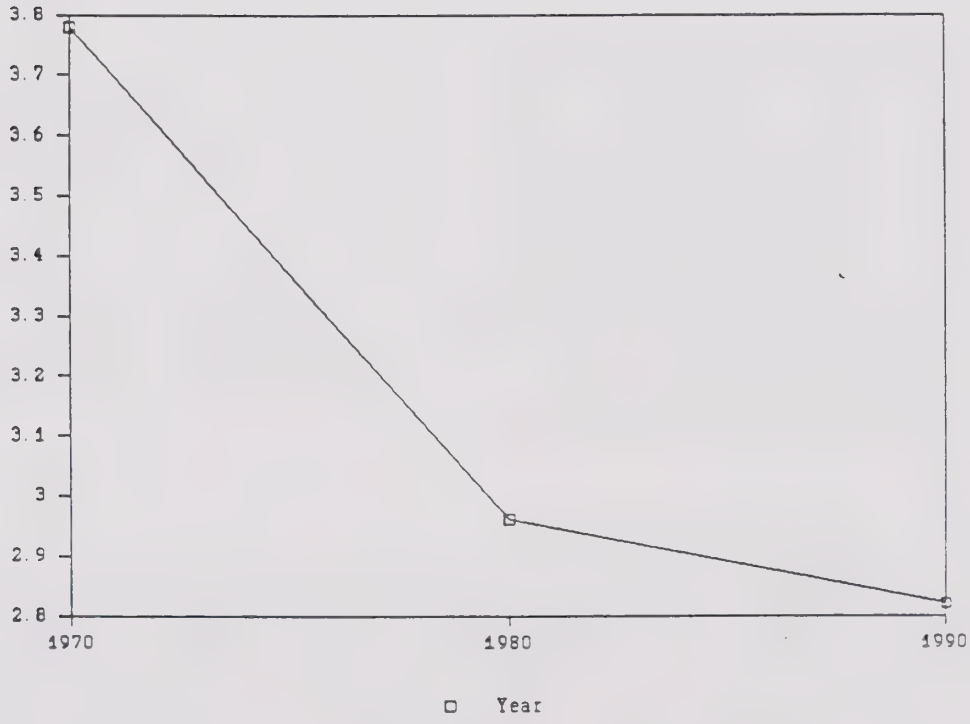
Figure H-1.5 Households by Type 1980



Household Size

Fremont's households have reflected a national trend towards a smaller size. The average Fremont household size dropped from 3.78 people in 1970, to 2.96 in 1980 to an estimated 2.82 in 1990 [5]. Fremont's average household size in 1990 is still much larger than the County average (2.51) or the regional average (2.54).

Figure H-1.6 Household Size



Household Income

On the average, Fremont's households are wealthier than other communities in the Bay Area. The Association of Bay Area Governments (ABAG) estimates the average income of a Fremont household in 1990 to be $49,300, higher than the County ($40,100) or Bay Area ($46,200) average. Of Bay Area cities with

populations over 100,000, Fremont is second only to Sunnyvale ($49,600) in average household income.

Overcrowded Households

The federal government defines an overcrowded household as one in which the number of individuals in the household exceeds one per room. According to the 1980 census 1,419 Fremont households exceeded the 1.01 ratio of persons to rooms; approximately 3.2 percent of the total households. Of these, 494 households exceeded 1.51 persons per room.

There is no current data on overcrowding. Average household size has continued to drop since the 1980 census implying less overcrowding. However, housing costs have risen faster than income which may have led to additional overcrowding in the last ten years.

H-1.2 HOUSEHOLDS WITH SPECIAL NEEDS

State law requires the City to estimate the number of households in the city which may have special housing needs, including large families, farm workers, the elderly, female-headed family households and the homeless, as well as any other groups the City deems appropriate.

While Fremont contains remnant agricultural uses and grazing land in the hill area, there is no evidence of any significant farm worker housing needs in Fremont. This issue is therefore not considered further in this report. All other groups are discussed below, as well as families with children, a group identified by the City's Housing Department as facing special constraints within the housing market.

Low Income Households

The most widely used definition of income groupings are those used by the Federal Department of Housing and Urban Development (HUD) to determine eligibility for Federal housing assistance. HUD divides households into four income groups defined in relation to the median income of the Statistical Area. Fremont is part of the Oakland Primary Statistical Area (OPSA) [6]. HUD estimates the 1989 median OPSA household income for a family of four to be $42,400 [7]. This is an increase of $17,058, or approximately 67 percent since 1980. Figure H-1.7 presents the income ranges for the four income groups.

In 1980, 14 percent of all Fremont households were very low income and 13 percent were low income, in relation to the median income for the Bay Area [8]. If those proportions still applied to the number of households in 1989, there would be 8,293 very low income households and 7,850 low income households in Fremont today.

Figure H-1.7 1989 Income Categories

	4 person	% of Households*	Number of Households**
Above Moderate (120%+ of median)	$50,900 +	51%	30,211
Moderate (80-120% of median)	$33,900 - $50,900	22%	13,032
Low (50-80% of median)	$21,200 - $33,900	13%	7,701
Very low (below 50% of median)	Below $21,200	14%	8,293

Note: Median income, family of four: $42,400 (1989)
* Proportion of households in 1979
** 1979 proportions applied to the 1989 Population

Family Households Headed by Single-parents

In 1980, 3,138 (7 percent) of the city's households were headed by single parents, 2,735 of which were headed by women. Not all households headed by single parents are disadvantaged. However, as often occurs with single-parent families, one parent must divide his or her time between career and family demands and support the family on one income. This circumstance is often further complicated for working mothers by social barriers confronting women in the work place; consequently, female-headed households more frequently experience financial hardship. Although female-headed households with dependent children represented only ten percent of total U.S. households with children in 1980, they accounted for 44 percent of all family households with children below the poverty level.

Households With Senior Members

About 5 percent of the population in 1980 were seniors over 65 years of age. Assuming the same proportion (5 percent) for the 1989 population, the city would have 8,450 seniors over 65. A significant number of seniors live on limited incomes. The City's Housing Department estimates that 15 percent of all low income households needing assistance are elderly.

Senior households face many special housing problems. Many live on fixed incomes and may be "house-rich" but cash-poor. Some own large homes which they have difficulty (either financial or physical) maintaining. Many feel isolated or insecure in single family homes and are ready for a more communal environment but do not wish to leave a familiar community. Many require that health and social services be combined with their living environments.

Large family Households

The needs of larger families with incomes at or above the median are generally met through purchase or rent of single family homes. However, larger families

with incomes below the median may have difficulty finding rental homes of sufficient size at affordable rents. In 1980, 20 percent of all renter households had four or more persons. A recent survey of apartments indicates only four percent of all apartment units have three bedrooms [9]. According to the Housing Authority of Alameda County, 27 percent of those on the waiting list for rental assistance in 1989 needed three bedroom units. Managers of apartments with below market rate three bedroom units in Fremont report these units are vacant less often and seem to be in shorter supply than other types of units. When larger units are not available, larger families may be excluded from renting available smaller units because of concern they would "overcrowd" the unit.

Households With Disabilities

The Community Resources for Independent Living (CRIL), a non-profit agency serving the disabled, has estimated that more than 6,000 Fremont residents possess physical disabilities affecting employment. Of those 6,000, 995 residents have disabilities which prevent their use of public transit. Individuals with such disabilities are also likely to have special requirements in regard to residential accessibility.

There are no available statistics on the current housing needs of the disabled. The disabled often require convenient access to services and special building design features or the ability to affordably adapt buildings to their needs. The City of Fremont opened its first and only project designed exclusively for low income disabled residents in 1989. It offers 24 units and in January 1990 had 47 qualified applicants on the waiting list.

Households in Need of Emergency Shelter

Because, by definition, homeless people lack a permanent address, it is difficult to estimate their numbers in a city. However, according to a 1987 survey [10] there are approximately 440 homeless persons in Fremont at any given time; 4.4 percent of all homeless individuals in the county. Homelessness does not have a single cause and the homeless population is comprised of people facing many different circumstances. A survey conducted by the Tri-City Homeless Coalition found that about one-third of the homeless individuals they served were children and two-thirds of those children were under the age of 5. Almost 60 percent of the adults and families had been homeless less than five weeks, and 35 percent less than one week [11].

Households with Children

Households with children have special needs in regard to the size and type of housing unit. While households with above moderate income can generally afford to buy units, many households with children who are of moderate and lower income must compete for rental housing. These households often have

difficulty finding rental housing due to policies and practices which discriminate against children.

H-1.3 HOUSING SUPPLY

Number and Type of Units

As of January 1989, there were an estimated 60,416 housing units in Fremont, an increase of 14,945 new units in nine years. The City of Fremont accounted for approximately 2.6 percent of the region's total housing stock of 2,289,374 units.

Fremont is composed primarily of single family homes, but with a significant proportion of multi-family housing. As shown in Figure H-1.9, Fremont has increased its proportion of multi-family housing in the last five years from 25 percent of all housing units to 30 percent. The number of mobile homes did not significantly change.

Figure H-1.8
Fremont Housing Stock By Type Of Unit*
1984 - 1989

	1984	1989
Single Family Detached or Attached:	35,876 (74%)	42,107 (69%)
2 to 4-unit Multi-family	1,416 (3%)	1,585 (3%)
5 or more unit Multi-family	10,743 (22%)	16,106 (27%)
Mobile Homes	627 (1%)	618 (1%)
TOTAL:	48,662	60,416

* Source: California Department of Finance

Congregate Care Facilities

Fremont has an array of private, congregate care facilities for residents of all ages. In total, there are fifty-three state-licensed group care facilities capable of providing housing for a maximum of 439 residents. Congregate care facilities include special support services such as housekeeping, food preparation, and social and physical therapy. Some provide medical and nursing care.

This specialized housing includes thirteen group homes which shelter up to a total of 69 residents who are, for a variety of reasons, unable to maintain

wholly independent lives. These homes provide shelter for anywhere from 2 to 6 ambulatory and non-ambulatory individuals per facility ranging in age from less than one year to 18 years of age.

There are also eighteen adult general-care facilities with a capacity of 137 total residents. These facilities provide shelter for as many as 38 residents per facility and offer skilled nursing care for both ambulatory and non-ambulatory adults ranging in age from 18 to 59 years.

Fremont's twenty-two senior care facilities provide shelter for up to 187 residents. They hold 5 to 38 ambulatory and non-ambulatory residents per facility, age 60 and over.

Emergency Housing Facilities

The Tri-City Homeless Coalition (TCHC) is a non-profit organization largely funded by the City of Fremont and Alameda County. It currently operates a temporary support center for the homeless in Fremont which provides meals, laundry, showers, social services and other support services. TCHC also provides shelter and beds on a rotating basis at two of eight participating churches in Fremont (For addresses and a map of the support center and churches see Appendix H-1.1A). The City has adopted an ordinance identifying locations appropriate for a permanent homeless shelter and funds have been appropriated to purchase a site and develop a shelter which will then be leased to TCHC. The City's Housing Department is currently seeking a site.

The City also partially funds a non-profit organization providing shelter for women. The Shelter Against Violent Environments (SAVE) provides services to battered women in southern Alameda County. It operates a shelter in Fremont for 30 women (the location is not publicly available due to security concerns), and also operates a transitional housing facility in Hayward.

Tenure, Age and Condition

Of the 44,125 occupied housing units in Fremont in 1980, about two thirds (29,093 units) were owner-occupied. The remaining 15,032 (34%) were rental units.

The 1980 census found that 1,932 units had been constructed prior to 1949. If those pre-1949 units are all still standing, they would account for about 3 percent of Fremont's current stock of housing. Of the city's 60,416 units (January 1, 1989), an estimated 12,000 were developed prior to 1960, and approximately 14,600 more homes were developed during the 1960s [12]. In total, about 44 percent of Fremont's housing stock in 1989 was at least 20 years old.

Because Fremont's housing is still relatively new, the 1980 census found only 1,839 substandard units. Of those substandard units, 1,104 were owner-occupied and 735 were rental units. The City conducted its own survey of substandard units in 1981. The City found 2,025 units in need of rehabilitation: 1,228 owner-occupied units and 797 renter-occupied units.

The City's most recent estimate (1989 Housing Assistance Plan) is 1,994 substandard units in Fremont, (1219 owner-occupied and 775 renter-occupied).

Vacancy Rate

The vacancy rate for a community is the percentage of habitable units which are currently unoccupied. Maintaining a housing supply with a marginal number of housing units in excess of actual demand helps to ensure mobility in the local housing market. The smaller that margin becomes, the stronger inflationary pressures grow on housing costs.

In 1989, the vacancy rate for all Fremont units was estimated to be 1.95 percent, below the 1989 Alameda County vacancy rate of 3.34 percent. The Association of Bay Area Governments estimates that Fremont's 1989 vacancy figure is about half of the "optimal" rate necessary to reduce inflationary pressures [13].

H-1.4 HOUSING COST AND AFFORDABILITY

For-Sale Housing

In 1989, the median resale price of a single family detached Bay Area home was $260,600 [14], a 22.5 percent increase from 1988. The Bay Area's median resale price is the highest for any region in the State, and considerably above the Statewide median of $196,500 or the national median of $93,100 [14]. Fremont's median resale price for single family detached homes is estimated to be slightly lower than the regional median (based on historical prices), although no current comparative data are available.

The average resale price of all types of housing (condominiums, townhouses and single family detached) in Fremont rose from $118,379 in 1983 to $228,995 in 1989, or a 93 percent increase in six years [15]. In the last ten years, it is estimated that for-sale housing prices have risen 150 percent, while median incomes have risen 67 percent. Consequently, the proportion of households able to purchase homes has declined. The California Association of realtors estimated that only 11 percent of Bay Area families could afford the median priced home in 1989, down from 20 percent the previous year [14].

In order to qualify for a median-priced Bay Area home in 1989, a buyer would need a minimum annual income of about $85,700 and the ability to carry a monthly mortgage payment of $2,100 [14]. As the cost of housing has risen, the amount needed for down payments has also increased, further limiting access to the for-sale market by first time home-buyers.

The median income household with an income of $42,400 in 1989 could generally qualify to purchase a home valued around $130,000 [16]. A review of housing sales in Fremont in 1988 indicates that virtually no new for-sale single family detached houses, and less than 200 new attached housing units were

priced at or below $130,000 [15]. Only 10 percent of all new housing units built in 1988 were affordable to those earning less than median income.

Older housing was generally more affordable, with over 1,500 units selling for under $130,000 in 1988. While the sales data do not indicate type of unit, it is assumed that almost all units affordable to median income households were townhouse or condominium units.

Moderate income households (up to 120 percent of median income) can generally qualify for loans for units which cost up to $152,000. Of all new and old units (condominiums, attached and detached single family homes) sold in Fremont in 1988, about 2,500 (35 percent) were affordable to moderate income households. These estimates are based on 1988 sales data and 1989 median income estimates for a family of four. Because for-sale housing costs rose considerably faster than incomes in 1989, the proportion of units affordable to moderate income households had declined further by early 1990, although more recent data are not available.

Rental Housing

The rent for a standard two-bedroom, unfurnished apartment in Fremont ranges from $600 to over $850 per month with newer units tending to rent at the higher level [17]. The median advertised rent in Southern Alameda County in October, 1989 was $630, an increase of only $5 since 1986. Rents have risen by an estimated 87 percent over 1980 rent levels while median household incomes have risen by 67 percent [18].

Figure H-1.9 shows affordable rent levels for each income group, assuming 30 percent of gross income is devoted to housing. Current rent levels ($600 per month) are affordable to households earning $24,000 or more per year. At current rent levels for a two-bedroom apartment, very low income households and some low income households earning less than $24,000 per year are not being served by the private rental market. Low income families of more than four people who need more than two bedrooms may also have difficulty finding affordable rental housing.

Figure H-1.9 Affordable* Monthly Rent by Income Level

Above Moderate Income (120%+ of median)	$1270 +
Moderate Income (80-120% of median)	$850 - 1270
Low Income (50-80% of median)	$530 - $850
Very low Income (below 50% of median)	Below $530

* Affordable: Maximum of 30% of gross income devoted to housing

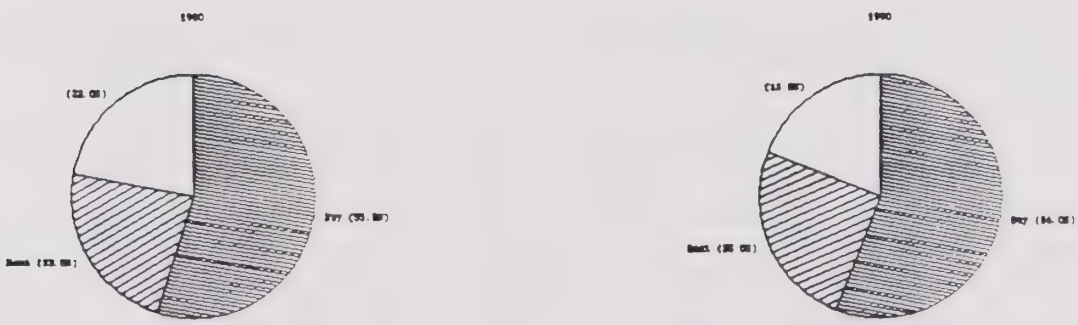
Households Overpaying for Housing

According to State law, a lower income household paying more than 25% of its gross income for housing is living in unaffordable housing and is "overpaying" for housing. The Federal definition of "overpaying" is 30% of gross income. Based on 1980 census information, ABAG estimates the percentage of low and very low income households overpaying (more than 25% of gross income) for housing, divided by renters and owners. According to ABAG, of the 7,215 low and very low income households which rent, 5,739 are overpaying. Of the 4,073 low and very low income households which own their own homes, 2,019 were overpaying.

ABAG estimates are based on 1980 data; more reliable data will be available after the publication of the 1990 census. However, according to data from the Bay Area Council, the proportion of median monthly income needed to buy the median priced single family detached home or to rent the median priced apartment has changed very little in this decade, as shown in Figure H1-10 [19].

Figure H-1.10

Monthly Cost of Buying or Renting a Home Compared to Median Income
1980 vs 1990



H-2 CURRENT HOUSING PROGRAMS

The 1985 Housing Element of Fremont's General Plan indicated how Fremont would try to meet "existing and projected [housing] needs of all economic segments of the community" (Government Code Section 65583), as required by State law. Those policies relate to both land use policies and direct involvement in the production of housing. This section of the General Plan Housing Background Report evaluates the City's progress towards achieving the goals it established in 1985. It includes five sections:

H-2.1: Description of Goals
H-2.2: Availability Goal
H-2.3: Affordability Goal
H-2.4: Accessibility Goal
H-2.5: Stability Goal

A sixth goal, related to energy conservation in housing, is addressed in the Energy Resources section of the Natural Resources Chapter of this General Plan.

H-2.1 DESCRIPTION OF HOUSING GOALS

The 1985 Housing Element contained five primary goals, as described below.

1) Availability: Expand the housing supply so as to provide greater opportunities for present and future residents of all income levels.

2) Affordability: Attempt to make housing affordable to present and future resident by encouraging the initiative of citizens.

3) Accessibility: Promote equal housing opportunities for all people regardless of the ethnic, racial or religious background, age, sex, physical condition, marital status or income.

4) Stability: Promote neighborhood stability and residential environment by encouraging initiative and independent actions.

5) Energy Conservation: Reduce energy use to decrease housing costs. [20]

Because goals, by definition, are targets towards which a city aims but may not achieve, the City also adopted more specific objectives to define what it expected to accomplish in the subsequent five years towards achieving the goals. Each objective was further subdivided into specific program actions the City proposed to undertake between 1985 and 1990 to implement the objective.

Objectives and programs are described in the following sub-sections. The City's energy conservation programs in regards to housing are not addressed here but instead are discussed in the Energy Resources section of the Natural Resources Chapter of this General Plan.

H-2.2 GOAL 1: AVAILABILITY

Objectives

A. To provide for sufficient and adequate sites for housing of all types needed to meet the General Plan objectives and community housing needs.

Progress: Between 1984 and 1989 almost 12,000 dwelling units were built in Fremont: 6,231 single family detached homes and 5,532 multi-family homes [21]. According to the Association of Bay Area Governments (ABAG), the city's share of regional housing need between 1980 and 1990 was 10,317 units. Between 1980 and 1989, 17,000 units are estimated to have been developed, or 70 percent more than projected need.

B. To provide for the distribution of housing by type, size and cost to insure that each planning area will provide a wide range of housing opportunities.

Progress: Between 1986 and 1988, some multi-family residential development occurred in every residential Planning Area with the exception of Niles. Information on the distribution of housing by size and cost to each planning area within the city is not available.

C. To promote the construction of rental housing to meet the current and projected needs of individuals and families requiring rental housing.

Progress: Some 5,532 multi-family housing units were built between 1984 and 1989. There is no information on what proportion of those multi-family units are rental housing. However, some 2,400 units of multi-family rental units were financed with mortgage revenue bonds during that period. Rents did not increase significantly between 1988 and 1989 and are still affordable to low income households (between 50 and 80 percent of the median).

D. To continuously review the General Plan and recommend changes based on community housing needs and opportunities for providing affordable housing.

Progress: Prior to the beginning of the General Plan update process in September, 1988 (when no further applications for

General Plan amendments were accepted), the City processed 18 General Plan amendments related to housing with a net increased development potential of 1,103 units (see Appendix H-A.1).

Programs

1.1 Increase density on vacant or under-utilized residential lands when desirable and consistent with other City goals and objectives. Quantitative Objective: Consider increased density for General Plan at least once a year.

Progress: Between 1984 and 1988, the City approved ten General Plan amendments that affected the residential density on a parcel of land. Of those amendments, four reduced density and six increased it. At least one application for increased density was approved per year. The net increase in housing potential was 163 units.

1.2 Evaluate the conversion of vacant or under-utilized nonresidential land to accommodate the projected housing needs. Quantitative Objective: Consider General Plan amendments annually.

Progress: Between 1984 and 1988, the City approved seven changes to the General Plan converting one type of land use to another. Of those seven, four modified land uses from a non-residential category to a residential use with a net increase of 940 units.

1.3 Cooperate with school district and other public agencies in studying potential residential uses of surplus property, including medium and higher density use when appropriate.

Progress: The City has evaluated all sites declared surplus by the School District for their suitability for multi-family housing. The City has purchased one 7.5 acre site and developed 186 dwelling units on that site. The City continues to evaluate all property declared surplus by public agencies.

1.4 Encourage use of "passed-over" parcels as residential infill by informing developers of their existence, and cooperate in finding solutions to any problems hampering the use of these parcels. Quantitative Objective: Make available vacant land information at Counter "A".

Progress: The City has published a residential vacant lands map showing vacant land designated for residential development. This map is made available at Counter "A," the City's public counter for planning concerns. The City's regular development review

process is designed to assist developers find solutions to obstacles to development of any parcel within the city.

H-2.3 GOAL 2: HOUSING AFFORDABILITY

Objectives

A. To encourage builders to reduce housing costs by use of innovative methods.

Progress: State law preempted local ordinance regarding the use of pre-fabricated units on single family lots. The City encourages the use of the "Planned District" development process which permits increased flexibility in site design and clustering of units.

B. To explore and use all feasible means of providing assistance to families and individuals whose housing needs are not met by the private market.

Progress: The City of Fremont has an award winning housing assistance program whose accomplishments are described in detail under the specific programs. In summary, the City has assisted in the development of 680 units of housing reserved for very low and low income households, with very low income households having priority (see Appendix H-A.2). The City has also used Mortgage Revenue Bonds to assist in the financing of almost 2,400 units of rental housing, much of which is affordable to low income households.

C. To seek low interest rate financing for housing from public and private sources, especially for low and moderate income households.

Progress: See comments on previous objective.

D. To explore ways to reduce housing costs by continuously reviewing the City's development regulations and procedures.

Progress: The City has developed a single review process where all departmental and outside agency comments and reviews are coordinated and presented in a single position. The Development Organization processes all construction plans except single family units. Allowing an applicant to deal with one person at one location assures accountability during the entire permit process, reduces the City's processing time and minimizes costs. The City is reorganizing and modifying the design of the permit processing area to provide more efficient service.

E. To recognize the provision of affordable housing as the greatest need to be addressed by the Community Development Block Grant Program and pursue landbanking as a means to aid in the provision of affordable housing for low and moderate income households.

Progress: The City has purchased a 7.5 acre site with CDBG funds and developed 186 dwelling units on the site. The City also has other CDBG funds targeted for land purchases and is seeking appropriate sites.

Programs

2.1 Allocate a substantial proportion of Community Development Block Grant funds to acquire sites and facilitate the development of housing affordable to lower income families, the elderly and the disabled in proportion to the level of need experienced by each of these household types.

Progress: Approximately 39 percent of CDBG funds have been appropriated for housing activities and 28 percent have been spent in the 1984 to 1989 period. CDBG funds have been combined with other City housing funds (such as Redevelopment Tax Increment) to develop 186 below market rate units, including 170 reserved and affordable to very low income households; 24 of those units are available to the physically handicapped; 80 units for the elderly; and 82 units for families [22].

2.2 Use 20 percent of property tax increments generated by increased property values in redevelopment areas to facilitate development of housing for low and moderate income households. Quantitative Objective: 50 units in five years.

Progress: Between 1984 and 1989, about $4.1 million in redevelopment set aside funds were made available for housing development. Of this, about $1.5 million were spent during that period. As noted in Program 2.1, tax increment funds were combined with CDBG funds to assist projects. Some 186 units of housing were developed with the combined funds, as described above.

2.3 Issue tax-exempt mortgage revenue bonds to finance multi-family projects including low and moderate income households. Monitor assisted developments to assure compliance.

Progress: Since 1984, the City of Fremont's Multi-family Housing Bond Program has issued $152 million in tax-exempt bonds to finance the construction of 2,392 new rental units in ten privately owned developments. These projects include 522 units dispersed throughout the complexes which are required to be rented to low and very low income households at below market rents.

The City regulates these ten projects through agreements which require all the units to be rented and at least 20 percent of the units to be reserved for low and moderate income households for either a ten or twenty year period, depending upon whether a density bonus has been provided and amenity fees have been waived. The rents for the below market rate units are set at 30 percent of either 50 percent, 70 percent or 80 percent of the median income to enable them to be affordable to very low and low income households. Because the City requires priority to be given to Section 8 tenants, 70 percent of the below market rate units are rented (1990) to very low income tenants.

The discount value of these below market rental units (i.e., the difference in the cash value of the market and the below market rents) totals over $1,230,000 annually. In addition to providing much needed affordable housing for low and very low income households, the programs have increased the overall supply of housing, easing the extremely tight vacancy rate in this area. The City has also sought to disperse affordable housing opportunities throughout the city.

2.4 Utilize density bonus and amenity fee waiver provision of planned district policy to facilitate development of affordable units for low and moderate income households. Quantitative Objective: 125 units.

Progress: Between 1985 and 1990, three projects received density bonuses resulting in approval of a total of 88 below market rate units for low and very low income households. To implement this policy, the City enters into an agreement with the developer to ensure the density bonus units are affordable and continue to remain available to low and moderate income households on a priority basis for 30 years.

2.5 Issue tax-exempt bonds to finance for sale housing to first-time moderate income home buyers and/or support similar program implemented by Alameda County.

Progress: The City has not issued tax-exempt bonds to finance single family housing but has made use of Alameda County Mortgage Revenue bonds for the development of a nineteen unit project sold to first time home buyers. Most purchasers had incomes less than 120 percent of the median income. The City has also participated with Alameda County in a Mortgage Credit Certificate Program which achieves a similar goal through a different mechanism with lower risk. Nineteen certificate reservations have been issued as of 1989, and an estimated 54 more will be available for Fremont.

2.6 Adopt a resolution urging federal and state governments to continue programs that assist or otherwise support affordable

housing for all economic segments. When appropriate, letters of support should encourage continuation of such programs as the Community Development Block Grant (CDBG) Program, the mortgage revenue bond program for single family and multi-family housing, California Housing Finance Agency's Home Loan and Multi-family Lending programs, and the Federal Section 8 - New Construction Programs and Section 202 Program.

Progress: The City has passed numerous resolutions in support of various State and Federal housing programs. These have included resolutions in support of the continuation of CDBG funds, continuation of mortgage revenue bonds and general support for State and Federal bills that would preserve or develop affordable housing.

2.7 Endorse and cooperate with BRIDGE and EDEN Housing, two nonprofit organizations dedicated to development of housing for low and moderate income households. Cooperate with similar organizations.

The City has worked with BRIDGE and EDEN Housing on four projects, with a total of 376 units, the majority of which are available to low and moderate income households.

2.8 Continue use of contracted plan checkers and other technical and professional personnel to reduce review time for applications.

There is no information on whether there has been a significant reduction on the review time for applications. There has been a significant increase in professional staff in both the Community Development and Public Works departments over the past four years.

H-2.4 GOAL 3: ACCESSIBILITY

Objectives

3A To support activities to eliminate illegal housing discrimination, policies and practices, and to promote cooperative tenant-landlord relations.

Progress: The City has actively supported various activities to eliminate illegal housing discrimination and has promoted cooperative tenant-landlord relations, as described in more detail under program actions.

3B To provide programs which would provide housing counseling services.

Progress: Several housing counseling programs are maintained or supported by the City, as described under the program actions below.

3C To encourage builders to design new or remodeled units to meet the needs of the elderly and disabled.

Progress: The City has adopted appropriate standards and enforced those standards to make units more accessible for the disabled. It has also adopted several programs to encourage remodeling of units, as described below under programs.

3D To develop a program to enable low and very low income households to modify existing housing to provide accessibility improvements for the disabled.

Progress: While this program has not been widely used, the City has made limited progress assisting low income households to make a few units more accessible, as described below under Programs.

Programs

3.1 Encourage the provision of childcare services by encouraging childcare facilities as an amenity in planned districts and as an onsite improvement provided by large employers.

Progress: The City has modified its zoning ordinances and established procedures for permitting childcare facilities in various residential, commercial and industrial districts.

3.2.1 Consideration of local ordinance replacing or supplementing state adaptability-accessibility requirements that become effective September 15, 1985 if the City does not enact its own guidelines.

Progress: State standards require that rental units be constructed so as to allow for relatively inexpensive conversion to make the units adaptable for the needs of the disabled. However, the State did not require condominium units to be adaptable, even when the project is planned initially for rental. The City adopted an ordinance requiring all condominium projects planned for initial rental to include adaptability improvements consistent with State law in regards to other rental units.

3.2.2 In cooperation with private developers utilize CDBG funds to secure a site for a small disabled housing development and seek funding for such project through Federal Section 202 Housing Program.

Progress: The City has developed Redwood Lodge, a 24 unit project designed and reserved for low income physically disabled residents.

3.2.3 Allocate CDBG funds to provide grants to make rental units accessible as a component of the City's Housing Conservation Program.

Progress: This program has not been widely used, although information regarding the program has been widely distributed. Only two units have been funded.

3.2.4 Disseminate information on the availability of State assistance for modifications to residences of qualified disabled persons (through County Department of Social Services).

Progress: City brochures regarding the availability of assistance for the rehabilitation or modification of residences of disabled people have been made available in various locations, including the County Department of Social Services. At the time individuals contact the City they are informed of the availability of State assistance for qualified people, but no grants are known to have been allocated.

3.2.5 Urge the Fremont Unified School District and the Fremont Newark Community College District to work with the county library, contractors, architects, unions and disabled organizations to develop a technical assistance program to assist disabled people make their homes more accessible.

Progress: The City provides direct technical assistance to assist disabled people make their homes more accessible. The City has worked with the Fremont Unified School District and other organizations to disseminate information regarding the availability of technical assistance. The City did not assemble a technical assistance group to design a program.

3.2.6 Work with Schools for the Deaf and Blind and other organizations of the disabled and the development community to create an awareness of the housing needs of the disabled.

Progress: The City has disseminated information regarding its disabled assistance programs through the Schools for the Deaf and Blind.

3.3 Continue housing service activities funded by Community Development Block Grant (CDBG) program. Activities being funded currently include: housing discrimination investigation and referral service; landlord/tenant counseling and mediation assistance; home seeker assistance and shared housing services;

emergency housing; counseling and shelter for battered women and their children.

Progress: The City's Housing Department has pursued each of these programs, as described below.

Discrimination. The City has contracted with a local fair housing agency to investigate complaints of housing discrimination based on race, sex, marital status, children, national origin, disability, or religion. In addition, the City has worked with the fair housing agency to survey discrimination against families with children, and to conduct a phone survey regarding the impact of occupancy limits on the availability of housing for families with children.

Homeseeking. The City has an active program assisting low and very low income households find housing. Among the services provided is a list of below market rate rental housing in Fremont and Southern Alameda County.

Landlord/Tenant relations. The City has been actively involved in improving relations between landlords and tenants. In one case, the City intervened to prevent 75 very low income elderly residents at the Victoria Gardens Apartments from becoming homeless. The owners of this HUD-assisted Section 231 project threatened to convert the units to market rents of up to $615 per month. The tenants had been paying $100-$140 per month under a Section 8 Loan Management Set-aside Contract. Through an intensive nine month negotiation the City was able to arrange for the tenants to continue to rent their existing units for at least five more years through the Section 8 certificate program. The City has also granted a General Plan amendment and approved a development plan submitted by the owners of Victoria Gardens providing for 30 additional units to be built on the site with the condition that priority will be given to Section 8 certificate holders for 30 years.

Battered Women. The City has assisted a community organization, Shelter Against Violent Environments (SAVE), with the purchase of a large residential facility to provide emergency housing for battered women and their children. In addition, the City of Fremont has joined with other local governments in Southern Alameda County to provide funds to renovate a 16-unit apartment complex into transitional housing for families who are victims of domestic violence. This project provides transitional housing for those families who are unable to locate permanent housing by the end of their stay in the three emergency shelters in Southern Alameda County. Families will be sheltered for up to two years while they receive job training, counseling, child care and other services to enable them to achieve self-sufficiency.

Homeless Shelter Program. As has been previously discussed, the City has appropriated funds to the Tri-City Homeless Coalition (TCHC) and Eden Housing for the development and operation of an emergency shelter to serve up 60 to 100 homeless persons and families. While this project is being developed, the City provides assistance to the Coalition to operate a temporary shelter for the homeless. This program has operated since the Winter of 1989 and is based in various churches in the Tri-City area, including Fremont. The permanent shelter will provide a range of services to enable the homeless to develop skills and means to become independent to secure permanent housing. The City has also provided funds to a non-profit organization to purchase a shelter for men in Hayward. Finally, funding has also been provided to TCHC to purchase an existing four unit apartment building to convert it to transitional housing for homeless families with children.

In 1989, the City also approved revisions to its Zoning Ordinance which now permits the operation of temporary emergency shelters and the development and operation of permanent emergency shelters in most zones in the city.

H-2.5 GOAL 4: STABILITY

Objectives

4A To develop and implement programs to prevent and remedy housing and neighborhood deterioration, and encourage private maintenance and rehabilitation activities.

Progress: The rapidly increasing value of housing over the past ten years has been a powerful force towards maintaining neighborhoods and housing. While the City maintains a few programs, as described below, they have not been utilized as effectively as some other City housing programs.

4B To program and construct neighborhood public improvements now lacking or substandard.

Progress: The City continues to make improvements in existing residential neighborhoods. The City adopted its first five year Capital Improvement Program in 1988 and has updated that program on an annual basis.

4C To encourage good functional site planning and variety in housing types and prices.

Progress: As noted previously, a wide variety of housing types have been built in Fremont over the last five years. Many

developers make use of the flexibility offered in the Fremont planning code to build clustered units, maximizing the opportunities offered by any particular parcel of land.

4D To encourage the formation of homeowners associations in order to obtain the neighborhood involvement in promoting neighborhood quality and stability.

Progress: The City encourages participation in and formation of homeowners associations by working with homeowners associations when issues arise affecting a particular neighborhood.

Programs

4.1 Continue Community Development Block Grant and Housing Conservation Loans and Grants and neighborhood improvement programs. Quantitative Objective: 150 low interest rate home rehabilitation loans.

Activities available to assist low and moderate income households include:

- Low interest rate home rehabilitation loans
- Deferred payment rehabilitation loans
- Grants to homeowners with low incomes for emergency repairs
- Street improvements and other public facilities in target areas
- Rebates to property owners in target areas to encourage exterior home improvements
- Grants to make accessibility modification to rental units

Progress: CDBG and Rental Assistance Program funds have financed the rehabilitation of 124 units between 1985 and 1990. The City has not made 150 rehabilitation loans partially because of lack of demand and partially due to dwindling resources available for all housing programs. The following types of financial assistance are still available to low and very low income homeowners and owners of rental housing occupied by low and very low income tenants:

- 5% deferred payment loans for very low income homeowners;
- 5% and 8% interest loans for moderate income homeowners;
- 8% interest loans for rental property owners with low and moderate income tenants;
- Grants to make rental units accessible to the disabled;
- Minor home repair grants for very low income home owners.

4.2 Continue Redevelopment Agency's activities to repair and construct residential streets and other neighborhood improvements in redevelopment areas.

Progress: There is relatively little residential land within the boundaries of existing redevelopment areas. A major street improvement affecting the Irvington residential area is underway in the Irvington Redevelopment area with improvements valued at $6.9 million.

H-2.6 OTHER HOUSING PROGRAMS

In addition to those programs identified in the Housing Element, the City has also taken advantage of other housing programs and opportunities arising in the last five years, including the following:

Tax Credits. The most recent project financed by the City, Regency Square, was one of the first in the nation to utilize the new low income housing tax credit made available through the 1986 Tax Reform Act.

Fremont Housing Scholarship Program. This program was developed through an informal series of meetings with representatives of the City, the Apartment Owners Association, the Board of Realtors, a local developer, the Housing Authority and the Tri-City Ministerial Association. The result is a voluntary program in which private owners of rental housing provide affordable housing on a transitional basis to very low income families needing assistance while they complete a job training course, seek employment and become established in a job in which they can afford to live more independently.

The objective of the program is to provide linkage between those families most needing housing assistance while in job training and rental property owners interested in reducing rents to provide a housing scholarship. As of June 30, 1990, 21 single parent households had received housing scholarships from six local rental property owners. Rents have been reduced by one-half for up to one year while the head of household undergoes job training and begins employment.

The Rental Assistance Program. This program is administered by ECHO Housing, a nonprofit housing service agency, to aid tenants in paying security deposits or delinquent rent over time. Along with other local governments in Southern Alameda County, the City funds the administration of the program and participated in the United Way 1990 Housing Task Force which developed this loan guarantee program. Over $200,000 has been raised from private sources to capitalize the loan fund which began operations in December, 1987. The program is designed to provide individuals and families with temporary assistance to help cover housing expenses by issuing a loan guarantee certificate to the participating landlord equal to the value of the security deposit. Program participants make monthly payments to the landlord to retire the debt.

Rent Stabilization and Conversion Ordinances. To protect the over 700 mobile home owners within the city, most of who are senior citizens on fixed incomes and/or persons of low and moderate income, the City Council in 1987 adopted Rent Stabilization and Conversion Ordinances for mobile home parks. Mobile home owners, unlike apartment tenants or residents of other rental units, are in the unique position of having made a substantial investment in a residence for which space is leased or rented. The low vacancy rate among mobile home parks and the high cost and risk of damage in moving a mobile home create a great imbalance in the bargaining relationship between park owners and mobile home park tenants in favor of the park owners.

The City's Rent Stabilization Ordinance limits space rent increases and provides for a dispute resolution process if an informal meeting between the park owners and affected tenants is not successful in resolving an issue. The Mobile Home Conversion Ordinance provides specific procedures and standards for relocation benefits in the case of a conversion of a mobile home park to an alternative use.

Rental Assistance. The City has prepared a memo of understanding for the Alameda County Housing Authority to provide rental assistance to city residents, including administration of the Federal Section 8 housing voucher program. Some 800 households are were receiving Federal rental assistance (Section 8) in Fremont in 1989.

H-3 PROJECTED HOUSING SUPPLY, DEMAND AND NEED

The development of policy is based on an assessment of existing conditions and expectation about the future. This section describes the City's expectations about housing based on current trends and expert opinion. It is divided into the following areas:

H-3.1 Housing Supply: An assessment of the land available for housing and potential supply of housing on that land. This section also considers areas with potential for redevelopment or for modification in designated land use to residential uses. The zoning and public services in relation to these sites is also discussed.

H-3.2 Housing Demand: Population and employment trends that affect housing demand and housing projections.

H-3.3 Supply and Demand: A comparison of expected overall supply to demand.

H-3.4 Housing Need: A discussion of projected housing needs based on an assessment of demographic and employment changes. This section also considers the expected housing needs of special groups.

H-3.5 Supply and Need: An evaluation of the fit between expected supply and projected need, and especially the needs of special households.

H-3.6 Governmental and Non-governmental constraints: An evaluation of the constraints that affects the ability of cities to meet housing needs.

H-3.7 Policy Implications of Projections and Analysis of Constraints

H-3.1 HOUSING SUPPLY

Land Supply for New Housing

In January 1989, there were approximately 650 acres of vacant or highly under-utilized residentially zoned land within the Fremont city limits, excluding the Hill Planning Area above the "Toe of the Hill" (see Land Use Chapter under "Hill Planning Area" for further definition and discussion). The highly underutilized sites have existing residential land use designations but have virtually no residential development (e.g., agricultural use) of the site. The residential development potential of this land is approximately 1,800 single family homes and 5,200 multi-family units (either condominiums or apartments) for a total of 7,000 housing units. At the end of 1989, there

were also an estimated 1,100 single family homes and another 1,000 multi-family homes approved for development or under construction. Finally, based on the policies and direction established in this General Plan, the residential development potential of the city is expected to increase due to the conversion of some industrial and commercial land to residential use. As a result of expected conversion of commercial and industrial land, and some limited increase in density in selected locations, the development potential of the city will increase by an estimated 2,500 multi-family units, and 400 single family units. The total residential development potential of the city in 1990 is then about 11,700 units (Figure H3.1)

Figure H-3.1 Residential Development Potential

	Single Family	Multi-Family	Total
Vacant and Underutilized Land	1,800	5,200	7,000
Under Development	1,100	1,000	2,100
Plan Modification	400	2,200	2,600
Total	3,300	8,400	11,700

With regard to sites for particular housing types:

Rental Housing. Multi-family rental housing is a potential use at any of the sites planned for multi-family housing within the city. As noted above, 8,400 multi-family units are possible, over 70 percent of the development potential within the city.

Factory Built Housing. Factory built housing is permitted on any single family lot of record, as required by State law.

Mobile Homes. There is an existing supply of 618 mobile homes in Fremont. The City has several ordinances preserving the existing affordability and availability of sites for mobile homes. No additional sites are identified within the city as being suitable for new mobile home developments.

Other Development Potential: Second Units and Hill Planning Area

In addition to the development opportunities identified above, the City also permits second units (with some restrictions), and has some limited development potential in the Hill Planning Area. Each is discussed below.

Second Units. Secondary units (also known as granny-flats, in-law units or accessory units) are permitted in single family residential districts, subject

to specific conditions regarding location, size, parking standards and other factors. Such units can reduce the costs of maintaining a home for low and moderate income homeowners (e.g., seniors on fixed incomes).

The City's standards for permitting second units are sufficient to protect the health, safety and welfare of existing neighborhoods, without unduly restricting the potential for second unit development. The criteria for second unit development on single family lots primarily establish setback requirements for a second unit. About two to six units are approved each year. Based on the low number of applications and approvals, it appears there is little demand for these additions.

Hill Planning Area. The Hill Planning Area of Fremont encompasses 13,500 acres on Fremont's eastern flank within the city limits, and additional land outside of the city's existing boundaries.. The development of this area within the city's boundaries is largely controlled by a 1981 Hill Area Initiative. The development potential of approximately 7,000 acres in private ownership and above what is called the "Toe of the Hill" (see Land Use Chapter for further definition and discussion) is limited by lack of services and environmental constraints. Due to the difficulty in predicting the amount of development in this highly constrained area, no residential development is assumed for the Hill Planning Area above the Toe of the Hill in this General Plan.

The development potential of the Hill Planning Area would increase if urban services were made available. Urban services would lead to a very limited increase in the development potential of the land on the most constrained Hill Face, but a significant increase in the less physically constrained plateau area east of the Hill Face. The development potential of the city's eastern hills is addressed under "Hill Planning Area" in the Land Use Chapter. As discussed in that section, several planning studies are required before the City arrives at any conclusion regarding the advisability of development in this area. Until those studies are completed, no future development potential is assigned to this area.

Future Development Potential/Redevelopment

This General Plan provides for a small increase in residential development potential over the previous General Plan. This plan also identifies several areas where residential use of underutilized land, modification in current designations or redevelopment of land would permit a significantly greater increase in housing supply in Fremont. The following locations are identified as the most likely areas where housing development potential may be increased in the future.

- Central Business District. Additional housing potential is feasible in mixed use projects or in areas currently part of or adjacent to the developed commercial area of the Central Business District. These highly underutilized sites are currently designated for commercial use. An analysis of the development potential of these areas will be undertaken as part of the CBD

planning process proposed in this General Plan. It is expected that development in this area would be similar in character to other surrounding higher-density areas in the Central Planning Area, where densities range from 20 to 50 units per acre. This area faces no known infrastructure constraints, and most neighborhood services are available.

- Community Commercial Centers. These are areas in and around existing district commercial centers subject to redevelopment and change over the next twenty years. There is potential for mixed use and moderate and low density residential uses in areas which are currently designated for commercial use. These areas appear to have sufficient infrastructure to accommodate additional housing, similar in character to surrounding areas. The adequacy of neighborhood services must be assessed as part of future planning studies recommended in this Plan. The studies will also assess where housing can best be located, identify appropriate land use designations and evaluate development potential.

In addition, several "study areas" have been identified where conversion to an alternative use may be appropriate. One of the uses under consideration would be housing. However, more analysis is required prior to making a final determination on a modification in land use. Among the study areas identified in this plan are the following:

- Warm Springs BART Station Area. This BART station area is currently designated for industrial use.

- Fremont Shores Study Area. This area west of I-880 is currently designated for industrial use.

The planning studies required prior to redesignation of land in these areas are underway (1990). Among the issues which must be addressed in these studies is the impact of nearby industry on any possible residential uses and the impacts of housing on nearby industry. In addition, the availability of neighborhood services (schools, parks, police and fire) must also be considered. Because of the differential in demand for water and sewer service between residential and the industrial use previously planned for these areas, the long-term availability of water and sewage treatment service must be assessed. If future studies and the City Council conclude residential development in some or all of the proposed areas is appropriate, the residential development potential of the city could be increased by 3000 to 6000 units, predominantly multi-family housing. The actual amount will depend on the amount of land converted.

Figure H.3-2 presents the mix of housing in the city expected in the year 2010, assuming some conversion of the sites identified above, and assuming all land with significant residential development potential is built-out.

Figure H3.2
Mix of Housing With and Without Conversion, 1989 - 2010

	EXISTING 1989	NO CONVERSION 2010	CONVERSION 2010
SINGLE FAMILY HOMES	42,100 (70%)	45,400 (63%)	45,600 - 45,800
MULTI-FAMILY HOMES (condo/apts)	18,400 (30%)	26,700 (37%)	29,900 - 32,700
TOTAL	60,400	72,100	75,300 - 78,500

Note: does not include mobile homes

Service and Zoning to Land with Residential Development Potential

With the exception of the Hill Planning Area, the City does not face significant constraints in regard to providing services to areas currently planned for residential development. (see Public Facilities Chapter for further discussion) Most areas designated in the General Plan for residential use are also zoned for residential use at densities consistent with that shown in Figure H3.7. The City does not provide sewage treatment or water in the city. These are provided, respectively, by the Union Sanitary District and the Alameda County Water District. City staff has met with each of these agencies to review the City's development plans. Each of these Districts has indicated its commitment to providing sufficient service to meet expected demand due to growth. Neither agency expects significant long-term constraints with the exception of the ACWD which, like most other water districts in the State, faces some uncertainty in regards to long term water supplies (a more detailed discussion of public facilities is found in the Public Facilities Chapter and Background Report).

Existing Housing Supply

The main source of housing in the future is not new housing but turn-over in the existing housing stock. Fremont's housing stock is in excellent condition today, partially because most of it is relatively new. But by the year 2010, the 12,000 homes built in Fremont prior to 1960 will be more than 50 years old, and the 14,600 homes developed in the 1960s will be over forty years old. These older homes will require significantly increased maintenance and most will undergo substantial modification, modernization and rehabilitation during the next twenty years.

The pattern in other Bay Area cities has been for older homes to be expanded to the maximum size permitted on a lot, reflecting the increased value of land and homes. Over time, the supply of smaller, older single family homes

suitable for first-time homebuyers is likely to shrink. Expansion and modification of homes can also have a significant impact on the existing character of a neighborhood.

H-3.2 DEMAND

Near Term Demand

The Association of Bay Area Governments (ABAG) is required by State law to estimate regional housing needs for the next five years and allocate that need to local jurisdictions. Cities are required to consider the identified need in their General Plans. The 1988 ABAG forecast of housing needs included estimates for 1988 to 1995 [23]. The forecast consisted of three primary components:

1) Existing need. This is the number of housing units needed to achieve an "optimal" vacancy rate on January 1, 1988. For cities like Fremont, very low vacancy rates imply a shortfall in production relative to demand. ABAG projections rectify this current shortfall by increasing the projected need to achieve the "optimal" vacancy rate. For example, if the city's vacancy rate is 2% and the optimal vacancy rate is 4%, ABAG determines how many units would be required to achieve the 4 percent vacancy rate. These units are then added to the projected need.

2) Projected need. This figure is based on the number of housing units needed to accommodate projected household growth between 1988 and 1995 at the optimal vacancy rate.

3) Alternative zoning. This number reflects the need for communities to adopt alternative zoning (or use other means) to accommodate a significant proportion of the projected housing demand resulting from expected employment growth in that community. ABAG has established as a goal for every community to accommodate half of the difference between what it is currently projected to accommodate and the housing demand expected due to increased employment growth. In other words, if a city is projected to accommodate 500 housing units, but expected employment growth would lead to a demand for 1,000, ABAG is recommending the City adopt alternative zoning to accommodate an additional 250 housing units, or half of the difference. ABAG has modified this fifty percent goal for some communities which have traditionally been bedroom communities providing more housing than jobs. Because Fremont has been a bedroom community, the goal set for Fremont is to accommodate 26 percent of the difference.

The conclusions of this analysis are presented in Figure H-3.3. Total projected need between 1988 and 1995 is for 8,151 units. Because housing production in Fremont during 1988 and 1989 was 3,695 units, the adjusted 1990-95 projected need is 4,456 housing units.

Figure H-3.3 1988 - 1995 Housing Needs

Projected 1988-90	Projected 1990-95	Alt. Zoning Need	Total 1988-95	Production 1988-1989	Total 1990-95
730	6,925	496	8,151	3,695	4,456

Long Term Demand

In addition to preparing estimates of need, ABAG also prepares long term forecasts for the Bay Region. The regional forecasts help cities to plan for the future in the context of the region's growth and to identify long-term local and regional development issues. Cities are not required to include these forecasts in their Housing Elements, but they are the basis for regional infrastructure and transportation planning and should therefore be taken into account.

According to 1990 forecasts, [24] Fremont is projected to add 12,220 households by the year 2005 (Figure H-3.4). ABAG forecasts Fremont's average annual household growth rate to slow from 3.9 percent in the 1980s to 1.7 percent for the 1990s, and .6 percent rate for the 2000 - 2005 period. Fremont's growth rate through the year 2000 is still higher than the county's or the region's. Fremont's slowing growth reflects the increasing scarcity of vacant land in Fremont planned for residential development. While housing development is projected to slow over the next fifteen years, job growth is projected to increase by 71 percent.

Figure H-3.4 Growth Forecasts; 1980 - 2005
(ABAG, Projections '90)

	1990	2005	Change	%Change
Population	175,200	203,600	28,400	16%
Households	61,190	73,410	12,220	20%
Jobs	55,870	95,400	39,530	71%

H-3.3 HOUSING SUPPLY AND DEMAND

Near Term. Fremont currently has vacant land planned for residential use (outside the Hill Planning Area) or projects under development to accommodate 11,700 dwelling units compared to a regional forecast need for the next five years of 4,456 units (not including land use modifications in this plan). Fremont has sufficient land for residential development to accommodate the five year share of regional need forecast by ABAG.

Long Term. ABAG's five-year forecasts are based on need not on past rates of development. As noted in previous sections, Fremont's residential development has exceeded past estimates of regional need by 70 percent. If past rates of growth continued (1800 per year), the city would be out of residential land by 1997.

However, Fremont's past rates of growth are not expected to continue in the future. Because of the growing scarcity of land, and because most remaining development potential is for multi-family housing (which has been constructed at a slower rate), it is expected future growth will be much slower. Using ABAG's projections as a basis for estimating annual growth, the city is expected to add an average of 1,000 units per year over the next ten years, and 400 units per year thereafter. Assuming none of the land identified as having potential for conversion to residential use is actually converted, the city will build-out all land currently planned for residential use in the fifteen years. Land available for single family detached housing is likely to be virtually built-out by 1995.

While almost all vacant land designated for residential use may be developed in the next few years, residential development will not stop. There is likely to be some limited new development as the city matures and undergoes redevelopment and modification of existing land uses.

Fremont's development potential could be increased by conversion of some or all of the land previously identified as having some potential for conversion to residential use. The estimated increase in residential development potential from conversion would be about 6,000 units, or add an additional fifteen years of residential development potential for the City, at 400 units per year.

Without conversion, Fremont is estimated to fall short of meeting ABAG's projections for the year 2005 by about 1300 units.

H-3.4 HOUSING NEED AND EXPECTED SUPPLY

The previous sections described future housing supply and demand primarily in quantitative terms. Because of the regional nature of housing markets, the types of housing built in Fremont may not fit the needs of Fremont residents and workers. This section discusses expectations regarding housing needs and the relation of need to expected supply.

Projections of housing need are based on assumptions about the future character of Fremont households. Those assumptions, in turn, are based on past trends and current conditions. The following discussion describes the assumptions regarding need used for this General Plan.

Because of the regional nature of housing markets, housing development in Fremont may respond to regional demand and not to the needs of Fremont's households. Local government land use plans can help guide development to be more responsive to local needs. This section focuses on the ability and likelihood of the private market responding to identified needs given Fremont's current land use plans. This section is followed by a more detailed discussion of the private and public barriers that exist preventing supply from matching need, and the constraints the City faces in addressing those barriers.

Household Type and Size. Fremont will continue to have a predominance of family households; but the proportion of traditional nuclear families is likely to continue to decline in the future. There will be more single parents, more elderly, and more unrelated individuals and other non-family households living in Fremont in the future. The increasing predominance of family households with at least two workers is also likely to continue.

The average household is also projected to continue to decrease in size, although not nearly so fast as it did in the previous 20 years. This slowing in the reduction of household size reflects a national trend toward an increase in the proportion of households with children, as well as the high cost of housing which compels people to live together to afford housing.

Both of these trends suggest a continuing need to provide a wide variety of housing types to meet the demand by the varying types and sizes of households expected in the future. Fremont's land use plans provide for a variety of housing types while maintaining a predominance of single family housing.

Housing Cost versus Ability to Pay

For-Sale Housing. The typical single family detached home in the Bay Area has been too expensive for most moderate income households in the Bay Area for over ten years. While Federal government policies can have a profound impact on the affordability of housing (through interest rates and other factors), the strength of the Bay Area's economy and the lack of land for significant new growth imply there will not be a significant increase in the proportion of households able to purchase the single family detached home in the Bay Area. Many moderate income households may be permanently excluded from the Bay Area's for-sale housing market.

Due to the high costs of development, the private housing market has generally not been able to provide single family detached units affordable to those of moderate income [25]. In fact, most single family housing developers are moving towards more expensive models and are increasing the size and amenities

offered in new homes. Developers are targeting a higher income market because, as with most products, the more expensive the model the higher the potential profit margin for the seller. Because of the high demand and limited supply of new for-sale housing in the Bay Area, developers can successfully market to a relatively higher income proportion of the market.

The existing stock of older, smaller single family homes will continue to be the source of virtually all detached housing at prices affordable to moderate income households. Condominiums and townhouses will be relatively affordable for-sale housing compared to single family detached homes. Virtually no for-sale housing is expected to be affordable to low and very-low income households, and only a small proportion of the needs of moderate income households are expected to be met through for-sale housing in the future.

Rental Housing. Increases in rents have lagged behind increases in the cost of for-sale housing. Because fewer people can purchase housing (or have to wait longer to accumulate a down-payment), there is likely to be increasing number of households in the rental market leading to a high demand and significant increase in rents in the next few years. Despite expected cost increases, the demand for rental housing is expected to be strong for the foreseeable future implying a need for a growing stock of rental housing for all types of households, including families.

The private housing market will probably continue to be able to satisfy the rental demand of most moderate and low income households, assuming demand does not significantly out-strip increases in supply. However, market-rate rental units are currently too expensive to be affordable (at a maximum of 30 percent of income) to those of very low income, and to larger families with low income. Government assistance to very low income households and larger low income families will continue to be required.

Work Force

Jobs and Housing. Fremont has always been planned to be a complete city with a large employment base to complement its residential neighborhoods. However, regional housing demand has caused housing development to far outpace employment growth. In 1990, Fremont was estimated to have 1.74 employed residents for every job in the city. Regional demand has almost exhausted Fremont's supply of residential land while leaving the industrial land almost half vacant. The City's goal to have a large employment base to complement its work force has not been met.

In the next 15 years, the past pattern is projected to reverse: ABAG forecasts that between 1990 and 2005 Fremont will have 22,400 new employed residents and add 39,500 new jobs, about 1.75 new jobs for every new employed resident (Figure H-3.5). ABAG projections show Fremont accommodating 57 percent of the housing needs of new Fremont workers between 1990 and 2005. The projected increase in jobs begins to rectify past regional imbalances and moves Fremont toward achieving the employment base for which it has always planned. Even with projected rapid employment growth, Fremont will continue to have a large

surplus of employed residents. In the year 2005, Fremont is projected to have 1.25 employed residents for every job.

However, Fremont and the rest of the region face a significant constraint in achieving ABAG's forecasts. ABAG's forecasts show an overall regional imbalance between jobs and new residential development projected for the next fifteen years. If cities within the region do not all assist in meeting additional housing needs there will be insufficient residential development to accommodate projected regional employment growth.

Figure H-3.5 Jobs and Employed Residents, 1990 - 2005

	1990	2005	Change 1990 - 2005
Jobs	55,870	95,400	39,530
Employed Residents	97,300	119,700	22,400
Employed Residents/Job	1.74	1.25	.57

Source: ABAG Projections '90

Work Force and Housing Need. Fremont assessed the housing needs of the expected work force in a 1987 "Jobs/Housing Balance Study." According to the study, approximately half of new Fremont workers will be above moderate income, while the other half will be of moderate income or lower [26]. Given current housing costs, only a small proportion of new workers will be able to afford single family homes in Fremont. If affordable housing is to be available for a majority of the new work force, an increasing supply of more affordable housing types, including apartment, condominiums and townhouses, will be needed.

The land use designations of the remaining vacant land in Fremont mirror expected need with about three quarters of the city's remaining development potential targeted for multi-family housing at a variety of densities.

Much of the city's remaining development potential for single family homes is at the base of the city's hills. This land is of relatively high value and is leading to a growing supply of executive housing, helping to balance the city's large existing supply of middle-priced homes, and growing supply of more affordable housing types.

H-3.5 SPECIAL NEEDS

Lower Income Households

As required by State law, ABAG prepares five year estimates of housing need based on household income distribution. The City is required to consider these housing needs in its General Plan. Figure H-3.6 presents ABAG's estimate of housing need by income group [27].

Figure H-3.6 Projected Housing Needs by Income Category

Income Category		Annual Need	Five Year Need
Above Moderate	(41%)	365 units	569 units
Moderate	(21%)	187 units	1,192 units
Low	(16%)	143 units	1,093 units
Very Low	(22%)	196 units	1,602 units
TOTAL		891 units	4,456 units

The private rental market is expected to address the needs of most low income households earning 50-80 percent of the median income, assuming a continuing increase in the supply of rental units. Land is available to meet the demand, but market conditions and Federal housing and economic policies could have a profound influence on the market's ability to respond to the demand.

The needs of certain segments of the population with low income may not be met (as discussed below). The housing needs of households with very low income (below 50 percent of the median) are not expected to be met by the private market.

Loss of Affordable Units

As required by State law, the City has analyzed those projects with units subject to being lost to the supply of housing affordable to low income households due to termination of State, Federal or local programs, project-based contracts or other factors and developed implementation measures to preserve these units and to prevent or minimize tenant displacement.

The analysis includes an inventory of the units at risk of losing use restrictions between 1991 and 2000. The inventory is divided into two five-year groupings which coincide with the planning periods of the housing element and is located in Appendix H A:3. A cost

analysis of preserving versus replacing the at risk units, along with resources available for preservation is presented below. Quantified Objectives identifying the number of at-risk project units to be preserved and implementation measures (programs) to preserve these units are presented under Policy H 3.4.4 of the Housing Chapter of the General Plan.

At Risk Units. The City has the potential to lose 243 low income units by the end of 1995 and another 229 over the subsequent five years, or a total potential loss of 472 units by the year 2000. Of the 243 units that may be lost by 1995, 132 are located in the Sundale Arms Apartments which was financed under the Section 236 program. The remaining 111 units are located in City bond financed projects.

Section 236 projects fall under the Low-Income Housing Preservation and Resident Homeowners Act of 1990 (LIHPRHA). LIHPRHA restricts the ability of owners of Section 221(d)(3), 221(d)(41) and 236 federally subsidized units to prepay mortgages, eliminating the ability of owners to terminate affordable rent agreements and providing the owner with incentives to remain in the program. If an owner chooses to sell, LIHPRHA provides financing to tenants, nonprofits, or local governments who are given an exclusive right to negotiate to purchase the project. The earliest date at which the owner of Sundale Arms is eligible to receive incentives under federal law is February, 1993. A Plan of Action can be filed with HUD up to two years prior to that date. The City has not received a Notice of Interest to change or terminate the project's affordability controls.

Of the 229 units at risk of losing use restrictions between 1996 and the year 2000, 191 are located in City bond financed projects and 38 are located in two Section 8 New Construction projects, Rancho Luna and Rancho Sol.

Cost of Preserving Versus Replacing At-Risk Projects/Units. It would be more expensive to replace the units at risk of losing use restrictions in Fremont than to preserve them. Based on cost estimates for new construction of $80 per square foot for hard and soft costs and $30,000 per unit for land (including site work), the replacement cost for an 800 square foot apartment unit would be approximately $94,000 per unit. The cost to preserve a two bedroom unit, based on comparable costs for similar units, assumed rehabilitation costs of $2,500 per unit and 3% for soft costs including escrow, legal, etc., would be approximately $64,000 per unit. Using these estimates, the cost of preserving an at-risk unit would be approximately $30,000 less than replacing it. (See Appendix II-A.3 for more detail.)

As noted above, owners of LIHPRHA eligible projects are restricted in their ability to prepay mortgages. If owners elect to sell the property, they must notify and negotiate with a "Priority Purchaser" (nonprofit, tenant group or local or state government agency). Subject to the availability of funds, HUD will make a loan for 95% of equity, and the existing HUD loan can be assumed by the buyer. The minimum local subsidy required to purchase under

these circumstances is 5% of equity, substantially less than the projected $8.5 million cost of purchasing the project without HUD assistance.

The restricted rents of the below market units at Willow Creek Apartments, one of the two bond financed projects with use restrictions expiring before 1995, are set at rates affordable for households with incomes at 80% of the median. At this time, there is little, if any, difference between the restricted below market (BMR) rents and market rents. In renting the BMR units, the owners are required to give priority to tenants with Section 8 rental assistance. When the contract with the City expires, the rents may remain affordable to the same income groups without the necessity of purchasing the units to preserve affordability or providing incentives to the owners. The rents at Durham Greens Apartments, the other bond financed project with expiring use restrictions, are set at slightly lower rates affordable to households at 70% of the median. The owners can voluntarily retain some below market rate units and continue to accept Section 8 vouchers or certificates on a priority basis when their regulating agreements with the City expire. This appears feasible because the owners of both projects have voluntarily maintained rents for the below market rate units at an amount considerably less than is allowed by the City's regulatory agreement with the owners. Voluntary actions will result in no cost to the City.

Three of the five projects with units at risk of losing use restrictions between 1996 and 2000 are also bond financed projects with rents set at rates affordable to households with incomes at 70% and 80% of median. The same options for preserving affordability as described above could be used for these units.

The remaining two projects at risk between 1996 and 2000, Rancho Luna and Rancho Sol, are Section 8 projects. Both serve low income senior citizens with incomes below 50% of the median. When the Section 8 contracts on these projects expire in the year 2000, the owners may choose to renew the contracts. If this occurs, the 38 low income units in these projects will not be lost. The City can actively encourage HUD to offer new Section 8 contracts where appropriate when existing contracts expire. There is no cost associated with this action. If the owners choose not to renew the Section 8 contracts, the City could consider assisting the local housing authority or a local nonprofit to purchase the properties and continue the Section 8 project-based rent subsidies. The current local subsidy required to assist the purchase of these units could be as high as $60,000 per unit if no other government subsidies are available to leverage City funds.

Resources Available for Preservation. The options discussed above for preserving the units in Fremont at risk of losing use restrictions by the year 2000 should not require extensive financial assistance from the City. The purchase of Sundale Arms (which is subject to LIHPRHA) is the only project that might need financial assistance unless the Section 8 contracts for Rancho Luna and Rancho Sol are not renewed by the owners. The City has

both Redevelopment Low and Moderate Income Housing Funds and Community Development Block Grant (CDBG funds which could be used to preserve these units.

The City receives approximately $1.1 million in CDBG entitlement funding each year. Twenty percent of the funding can be used for administration and 15% is used for public services. The remaining $715,000 may be allocated for housing rehabilitation and other eligible projects including acquisition of housing units.

The City projects approximately $21.6 million will be received between FY 1992/93 and FY 2000/01 in Redevelopment Low and Moderate Income Housing Funds. A portion of these funds will be used for administration. The remaining funds are primarily targeted for the construction of new affordable housing units to meet housing element goals, but funds could also be used for housing preservation if necessary.

In addition to the financial resources available for housing preservation, two nonprofit development corporations, Eden Housing, Inc., and Mid-Peninsula Housing Fund, along with the Housing Authority of Alameda County, can assist the City in preserving the projects/units at risk of losing project-based affordability through expiring use restrictions in Fremont.

Senior Households

As people live longer, the percentage of the elderly in the population is increasing. This trend will be accelerated by the aging of the baby-boom generation which will begin to reach retirement age by the year 2010. While Fremont has traditionally had a relatively small proportion of people over 65, that proportion is expected to increase as the people who bought homes here in the 1960s and 1970s retire over the next ten years.

Senior households face special needs for more safe and communal environments, for assistance in maintenance and housing cost, for accessible locations, and for special health or nursing care. These factors imply a growing need for both publicly and privately maintained senior residences and group homes, skilled nursing facilities and programs to assist seniors living in their family homes. If the City chooses to satisfy the desire by many seniors to remain in familiar surroundings, new senior residential facilities need to be located throughout the city.

The private market is responding to the growing needs of seniors for specialized housing, especially for those seniors with above moderate income. Specialized nursing and care facilities are being developed in Fremont and elsewhere in the region. However, the needs of seniors of low or moderate incomes may not be met. In Fremont, further analysis of the

opportunities for the development of housing suitable for the elderly in locations throughout the city may be needed.

Large Households

Fremont has traditionally had a larger average household size than the rest of the Bay Area. Because of Fremont's family orientation as a community, it is likely to continue to attract larger families. Fremont has also attracted a growing proportion of ethnic minorities which tend to have larger than average family sizes.

The current housing stock of single family detached units generally responds to the needs of larger families with above moderate income. The private market has not yet responded to the rental needs of large low-income households who cannot afford to buy single family detached homes. These larger households also often face discrimination against families with children.

In the future, over 70 percent of expected new housing in Fremont will be in multi-family housing styles (condominiums and apartments). Such units tend to be smaller and have fewer bedrooms than single family homes and may not respond to the needs of larger families with incomes below moderate income.

Households with Disabled Members

Federal and State law and changes in the Universal Building Code should respond to the need for new housing to be more accessible for disabled people. However, as the society ages there is likely to be a growing need to assist people with converting older housing to make it more accessible to people who become disabled, and especially the elderly. There will also always be a need for units designed to accommodate more severe disabilities.

Many of the disabled are on limited or fixed incomes. For these people, the cost of modifying an existing home or rental unit to make it suitable may be prohibitive without some type of public assistance. High housing costs in general imply the need for additional housing affordable to the low and very low income households with disabled members. The current long waiting list for entrance to the City's assisted housing for the disabled is strong evidence of the lack of affordable housing for this special needs group.

Households in Need of Emergency Shelter

Emergency housing needs for the homeless, for those facing temporary emergencies, for battered women and children, and for others facing emergency shelter needs is not expected to change. It is difficult to predict whether the number of homeless or those in need of emergency shelter will increase significantly over the next twenty years. The need for emergency shelter is not expected to decrease.

The vast majority of those in publicly assisted emergency shelters are there because there is no alternative. The private market does not provide this type of residential service and is not expected to in the future. As noted previously, the City has funded the purchase of a site and the development of a permanent shelter for the homeless. The City has also established criteria for the shelter's location and several potentially potential sites have been identified by the Housing Department.

Families with Children

The baby-boom generation is having more children and there is a growing proportion of new immigrants with children. These groups will continue to demand housing appropriate for children.

There are two issues with regard to families with children, one related to supply and the other to discrimination. The need for an increasing supply of larger rental units has been discussed previously under "Large Households" above. In regard to discrimination, public programs can include anti-discrimination ordinances. The City can also emphasize the need for affordable housing for families with children as part of its direct assistance efforts. The discrimination families with children face in the rental housing market is unlikely to change without public action.

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H-3.6 GOVERNMENTAL AND NON-GOVERNMENTAL CONSTRAINTS

State law requires the City to consider governmental and non-governmental constraints in the provision of sufficient housing to meet expected needs. There are constraints associated with government actions; market conditions and community values and other conditions which influence housing production. Identifying these constraints enables the City to evaluate their impact and, to the degree possible or desirable, mitigate their effects.

It should be recognized at the outset that housing costs are generally determined by regional supply and demand factors over which Fremont has little control. However, a local government does have some tools it can use to increase the affordability of housing in its jurisdiction. The key factors determining cost which a local agency can feasibly influence through its development policies are described in the following section under "Governmental Constraints." A discussion of the market factors affecting housing development are discussed under the heading "Non-Governmental Constraints."

Governmental Constraints

Land use plans, policies and regulations, development exactions and permitting fees, and review procedures are lawful activities of local government. These powers serve to protect the public welfare. These regulatory powers can be used to constrain the housing market by providing barriers to private development. They can also be used to encourage or require developers to respond more effectively to the needs of the community.

Land use policies and their influence on the development of housing in Fremont are described below.

Residential Land Use Controls

Land use planning can affect the supply and cost of housing in several ways:

- Density. Density controls largely determine the type of unit permitted on a site. Lower densities (below six units per acre) are almost always single family detached homes, while higher densities (20 units per acre or more) are condominiums or apartments. Densities are identified in the General Plan and implemented through the zoning ordinance.

- Land supply. Land cost is largely determined by regional supply and demand factors. However, a local government affects the cost of land through its land use designation

(higher densities generally mean lower per-unit costs) and by controlling the local supply of land for any particular density.

- Unit size. Cities generally influence building size by establishing minimum and maximum densities of development and by establishing maximum lot-coverage and height standards (the building "envelope").

- Parking Requirements. Because the provision of automobile parking is a significant cost of residential development, parking requirements can have a significant impact on the affordability of housing.

Each of the above factors is discussed below in regard to City of Fremont policy.

Density Controls. Fremont's General Plan permits a wide variety of residential densities. Figure H-3.7 shows that the city has a significant supply of vacant land available for residential development at a variety of densities, including higher densities. The zoning is generally consistent with these density types.

Figure H-3.7 Vacant Residential Land

General Plan Designation	Vacant land	Potential Housing Units
Very low Density	90.4 acres	429 units
Low Density	319.7 acres	1376 units
Medium Density	268.0 acres	3160 units
High Density	19.0 acres	455 units
Very high Density	91.7 acres	4221 units
Total	788.8 acres	9641 units

The City has adopted a variety of other land use policies that can affect density and promote more appropriate housing development, including the following:

- Minimum Density Requirements. Fremont requires projects to achieve minimum densities in multi-family zones to ensure that projects are in conformance with City objectives for an area.

- Planned Districts. This zoning district provides "a vehicle for encouraging development of a mixture of housing types in order to improve the housing supply..." Planned Districts permit combinations of land uses and increased density.

- Density Bonus and Waiver of Fees (Adopted in 1982 and revised in 1989). A development may be granted up to a 25 percent increase in density and a waiver or reduction of development fees in exchange for below market rate housing. A recent (1990) change in State law requires some modification in the City's density bonus ordinance.

Land Supply Controls. Regional demand will have virtually exhausted Fremont's supply of residential land by the turn of the century. In the past twenty years Fremont has exceeded projections for residential growth and far exceeded the past estimate of its share of regional need. Because of a regional shortfall of land suitable for housing relative to demand, the City of Fremont by itself can do little to influence the cost of land through its land use policies. Even a significant increase in Fremont's land supply (i.e, an expansion of city borders eastward or additional development in the Hill Planning Area) would have a negligible impact on the overall regional supply of land and could have a significant negative impact on the City of Fremont.

Unit Size Controls. Most cities allow the private market to determine appropriate unit size and mix. Developers usually base their decisions regarding unit size on whether they are seeking a higher or lower income market for the unit, and also on the permitted density of development, land costs and other market factors. Because larger, more luxurious units generally provide higher profit margins there is a strong incentive to build these units, especially when demand is strong. The City does not currently have lot-coverage standards for single family development, although it does have building height and required building-setbacks which can limit the size of the building. Fremont's current regulations are not significant constraints on building size.

The density of development can help to limit building size. Higher densities tend to encourage units which are, on the average, smaller. Fremont's policy to require minimum densities in multi-family zones helps to keep unit sizes down and therefore relatively more affordable.

Parking Requirements. Parking can be a significant cost in residential development. This is especially true in higher density projects where parking is located underground. Reduced parking standards can mean reduced costs for the provision of parking. However, parking requirements are based on proven need and when modified can have impacts on the surrounding neighborhood.

The City's parking requirements are based on surveys of parking in multi-family housing developments within the city.

Building Codes and Enforcement

Building codes and enforcement do not generally have an impact on the availability of housing although they can affect the cost of housing. Building codes protect health and safety of building occupants and protect the housing consumer. Unnecessarily restrictive codes can increase the production costs of housing.

Most cities, including Fremont, follow the same basic building codes known as the Universal Building Code or UBC.

Building codes are enforced for both development of new housing (through inspections and review of development plans) and in existing housing when improvements are proposed to an existing dwelling unit, when there are complaints, or when standards are changed for specific types of units. The City regularly enforces the building codes.

Development Fees

Cities establish fees on new development to recover the governmental costs of processing applications, to ensure conformance with a city's development regulations, and for providing public services.

In Fremont, the costs related to processing and inspecting development ("building fees") are about $1,500, a relatively small part of total development fees. These fees are based on reviews of the costs to process applications for conformance with City regulations and requirements.

Public service fees are related to the need for such services as water, sewage and drainage, schools, parks, recreation and open space lands, streets, police and fire protection. For a single family home valued at $230,000, all fees combined are estimated at approximately $15,200 or 6.6 percent of the sales price of the home. The City's portion of those fees is $6,800 (44 percent of total fee costs) or 3 percent of the sales cost of the home. The remainder of the fees are assessed by other districts (sanitary, water and school districts) for the provision of utilities and school facilities.

Recent State law (1988) requires local fees to be reasonably related to the cost of providing necessary services to a project. The City is evaluating and revising its fees to ensure

conformance with State law. Fees are not expected to be reduced as a result of this analysis.

The City of Fremont has waived some fees as an incentive for low and moderate income housing. In effect, the City is indirectly subsidizing below market rate housing by providing necessary services at less than they are estimated to cost (a "fee-subsidy"). When fee-savings are passed through to future residents they can assist in making housing slightly more affordable, or increase the number of units provided at below market rates.

Local Permit Processing Procedures

The City of Fremont follows all State requirements in regards to permit procedures. In 1988 Fremont processed applications for over 1500 units of housing. The City already maintains a streamlined permit processing program including a coordinated review procedure. The City is also redesigning and reorganizing its public-assistance procedures to improve service.

On-Site and Off-site Improvement Requirements

On site and off-site improvements required by the City of Fremont are comparable to those required by other California cities. These requirements relate to the provision of roads, landscaping, and appropriate set-backs for development and are necessary for the health, safety and welfare of residents. These standards were not found to be an impediment to affordable housing. The City of Fremont provides significantly greater flexibility than many other cities in its extensive use of the Planned Development process and allows for flexibility in design and standards for affordable housing. In recent years, this process is used by the majority of residential developers in Fremont.

Offsite improvements are generally not required unless a need, related to the proposed project, is demonstrated. For example, intersection improvements may be required if indicated by a traffic study.

Other Governmental Constraints

By far the greatest governmental constraints on the City's ability to address housing needs are non-local. The Federal government's policies help to determine interest rates and the health of the economy, which in turn affect housing production and affordability. Federal tax policy has had a significant impact on the availability and affordability of rental housing. For example, the Tax Reform Bill had an adverse impact on the development of affordable housing by reducing the incentives to invest in housing.

Article 34 of the California Constitution constrains some affordable housing options by requiring local voter approval of some types of publicly funded housing.

Most housing assistance programs are locally administered in California but are heavily dependent on Federal and State resources. Local funding resources for housing are very limited. In addition to fee subsidies, some local funding is available through the use of funds generated by the Redevelopment Agency. Fremont currently is making maximum use of those redevelopment agency funds the State requires to be earmarked for housing, but these are inadequate to address expected need.

Cities generally rely on State and Federal housing assistance or on programs dependent on Federal and State actions. However, Federal resources for housing have been very limited over the last 10 years. In addition, the Federal government is further reducing its role in housing by allowing previous programs and contracts to expire or be terminated. The city is at risk of losing 341 units of affordable housing in the next five years, largely due to the loss of Federal support.

The City of Fremont has been a regional leader in promoting assisted housing. Despite its best efforts, the lack of sufficient funding resources in a very high cost housing market will make it very difficult for the City to meet all of the very low income housing needs identified by ABAG. In addition, the City has not been able to identify resources to preserve or fully replace units expected to be lost of units resulting from the expiration or voluntary prepayment of current housing contracts.

Non-Governmental Constraints

Regional Housing Market

Fremont's housing stock constitutes a little less than three percent of the region's housing. High demand for housing over the past fifteen years has driven housing costs in the Bay Area to be consistently among the two or three highest in the nation.

Fremont has not contributed to the region's housing problem. It has consistently provided more housing than its share of regional need, and has consistently provided a mix of housing types, including higher density and rental units. It has taken advantage of virtually every housing program and is recognized as a leader in meeting housing needs.

Fremont cannot solve the region's housing problem. In fact, having almost exhausted its supply of residential land, Fremont will no longer be able to play as significant a role in meeting housing needs in the future as it has in the past. Because of the large supply of

vacant land designated for moderate and higher densities, it is expected that the demand for higher density units can be met over the next ten to fifteen years thereby mitigating to a small degree any possible price increases that would result from insufficient supply of multi-family housing.

Price of Land

Land prices are a function of the sales price of a home and the costs of production. The higher the expected sales price, the more a developer can afford to pay for the land. The price of land is basically determined by regional supply and demand forces outside the control of local government.

Local governments can affect the per-unit price of land. Land planned for multi-family housing has a much lower per-unit cost than land planned for single family housing, especially in the Bay Area where the supply of land for single family housing is dwindling. The price of land for multi-family housing has not escalated as rapidly, and the city's large supply of such land should continue to mitigate against rapid increases in price.

The approximate range of per-unit cost of land is $100,000 to over 1 million dollars for single family homes, and $30,000 to $50,000 for multi-family homes.

Price of Construction

Construction costs, like other costs of housing development, are largely fixed by regional supply and demand forces. The Bay Area has particularly high per-square foot construction costs relative to less developed areas within California. High costs relate to the higher costs of labor and high demand for supplies in the Bay Area, and are partially due to the increased amenities and size of Bay Area homes.

Hard-construction costs (costs of materials and labor) for a single family home are estimated to be $40 - $50 a square foot, depending on the size and complexity of the building (Source: 1989 Building Cost Manual, costs for Oakland Region). Hard construction costs for a 1200 square foot multiple family dwelling range from $42 - 48 a square foot, depending on the number of units.

The total costs of developing a single a residential unit will vary tremendously depending on the costs of land, land preparation and financing. In general, the selling price of new residential development reflects the costs of development plus a 12 - 15 percent profit

margin. A 2000 square foot single family home will generally include the following components:

Land Cost: (4000 square foot finished lot): $100,000

Construction: $90,000

Fees and Hook-ups: $18,000

Financing: $23,110 (10% financing of $231,000 for one year)

Cost: $266,000 (including 15 per cent profit)

Finance Costs

The finance costs of development are largely fixed by Federal economic policy. While finance costs have dropped significantly from the 13- 15 percent range prevalent in the late 1970s and early 1980s, they have not dropped to the four to six percent rates prevalent in the 1950s and 1960s. Rates have remained in the 9 - 11 percent range for the last few years, despite considerably lower inflation rates. Each percent in interest rates has a significant impact on affordability of for-sale housing, and on the cost of producing housing. Some banks and other agencies are now experimenting with alternative financing mechanisms to permit more people to qualify for mortgages.

There is no indication that the City of Fremont faces discrimination in the provision of financing. A survey of local banks indicates mortgage, home improvement and construction rates are similar to those found elsewhere in the Bay Area. The City's anti-discrimination program in housing has not received complaints of systematic efforts by banks to deny loans to specific areas of Fremont, or to any ethnic or income group.

While cities can use tax exempt bonds to reduce finance costs, changes in Federal policy in the last few years have severely restricted the availability of tax-exempt bonds. Low income housing tax credits also help developers produce affordable housing, but they are in short supply and face termination if Congress and the State does not extend this program beyond 1990.

H-3.7 IMPLICATIONS FOR PUBLIC POLICY

Removal of Government Constraints

Fremont is only able to address potential local government constraints. In general, the City places relatively few constraints on development beyond those typically imposed by local governments to protect the welfare of homeowners and renters. The City of Fremont has maintained a large supply of land suitable for multi-family housing. Its policies have allowed this city to maintain a supply of market-rate rental housing that meets the needs of most low income renters.

Housing Affordability

For-sale housing. City actions are unlikely to affect the cost of for-sale housing in Fremont. Fremont can seek to encourage housing that is relatively affordable by maintaining a supply of land for the production of multi-family housing styles (condominiums and townhouses) and by encouraging smaller single family detached housing units. The average size single family home of over 1,800 square feet in the 1980s is 50 percent larger than the typical single family tract home built in the 1950s. Smaller homes can be attractive options for first-time home-buyers.

Rental Housing. Multi-family projects are either developed as rental or condominium units depending on market factors. As noted in previous sections, Fremont has made extensive use of mortgage revenue bonds to encourage the development of rental housing. The City intends to continue to use this tool in the future to the degree bond funds are available.

City incentives and/or regulations may be required to encourage the development of larger rental units to meet the needs of families. When providing incentives or financing for the development of below market rate units, the City could insist on a larger percentage of three bedroom rental units than is typically developed.

New Housing Programs

An overall assessment of the housing programs adopted in the 1985 Housing Element shows that the City has generally been successful in implementing the programs it identified. Those few programs where little or no progress was made have been dropped or modified to reflect the reasons for lack of progress. Several programs are unlikely to be as productive in the future as in the past, such as mortgage revenue bonds. The objectives for these programs have been scaled back to reflect expected funding and changes in State and Federal law. Other new programs have been implemented as resources have become available or as needs have been identified, such as programs for families with children or to address the potential

loss of housing for low income families. These new programs are now incorporated in the Chapter policy section. Finally, the new policies reflect the need for increased flexibility to respond to changes in funding, and to use a variety of techniques in tandem to meet expected needs.

HOUSING BACKGROUND REPORT
NOTES

1. Households = Housing Units x Occupancy Rate of 98.05.

   The number of Housing Units in Fremont in 1989 was 60,416. California State Department of Finance, "Population and Housing Estimates for California Cities and Counties (Report E-5) for January 1, 1989; April 25, 1989.

2. As required by State law, this Background Report to the Housing Chapter of the General Plan was prepared in Spring, 1990. At this time, the only reliable source of much demographic and other data on housing and employment is the 1980 census. Unfortunately, these data are somewhat older than is desirable. Nevertheless, the 1980 census data are often used in this report due to the lack of more reliable information and all unreferenced 1980 data are taken directly from census information or derived from census information by the Fremont Community Development Department.

   Whenever possible, the 1980 census has been updated with other sources of information, although almost no other source is as comprehensive or complete. When 1990 census data are available in 1991 - 1992 some of the statistics used in this report may need to be updated to reflect significant new information.

3. The Association of Bay Area Governments defined a household as those person(s) who occupy a group of rooms (or a single room) which constitutes a housing unit. A group of rooms or a single room is regarded as a housing unit when it is occupied as separate living quarters. That is, when the occupants eat separately from other persons in the building and have direct access from outside the building or through a common hall. Source: Association of Bay Area Governments, "Projections 87"; July 1987, page 4.

4. The nine-County Bay Area is the regional planning area for Fremont. It consists of Alameda, Contra Costa, Marin, Napa, San Francisco, Santa Clara, San Mateo, Solano and Sonoma counties. The number of regional households is estimated by the State Department of Finance, 1989.

5. ABAG, Projections '90 (1970 and 1980 numbers were derived from the Census while the 1990 number is an estimate).

6. The Oakland Primary Statistical Area (OPSA) is Alameda and Contra Costa Counties.

7. United States Department of Housing and Urban Development, "Information Bulletin Memorandum for All Public Housing Authorities," February 17, 1989.

   While HUD figures are for a 4-person household, the average household size in Fremont is 2.82 people (figures can be adjusted for various household sizes).

8. ABAG, "Housing Needs Determinations," January 1989, page 37. These particular estimates are based on a comparison of Fremont household incomes to the median income for the Bay Area, and not to median income for Fremont or the Oakland Primary Statistical Area.

9. Housing Department of the City of Fremont, from unpublished data

10. Emergency Services Network of Alameda County, "Homelessness in Alameda County, 1989 Composite Profile and Unduplicated Count."

11. Tri-City Homeless Coalition, "Progress Summary," May 21, 1990

12. Estimates of housing built before 1970 are taken from comparisons of 1960 and 1970 census information. The estimate assumes that almost all of the housing built after 1950 is still standing.

13. A discussion of "Optimal Vacancy Rate" is found in the Association of Bay Area Governments, "Housing Needs Determination," January 1989.

14. Bay Area Council, March, 1990. This was unpublished information calculated from information provided to Bay Area Council by the California Association of Realtors.

15. Southern Alameda County Board of Realtors. The average is derived from reported sales of housing listed in the Multiple Listing Service. This does not include many new homes sold by developers, and homes not listed in the Multiple Listing Service. An average home sales price tends to be somewhat higher than median price.

16. A "rule of thumb" of three times gross income for housing is roughly assumed. For this calculation, 3 times $42,400 is roughly $130,000.

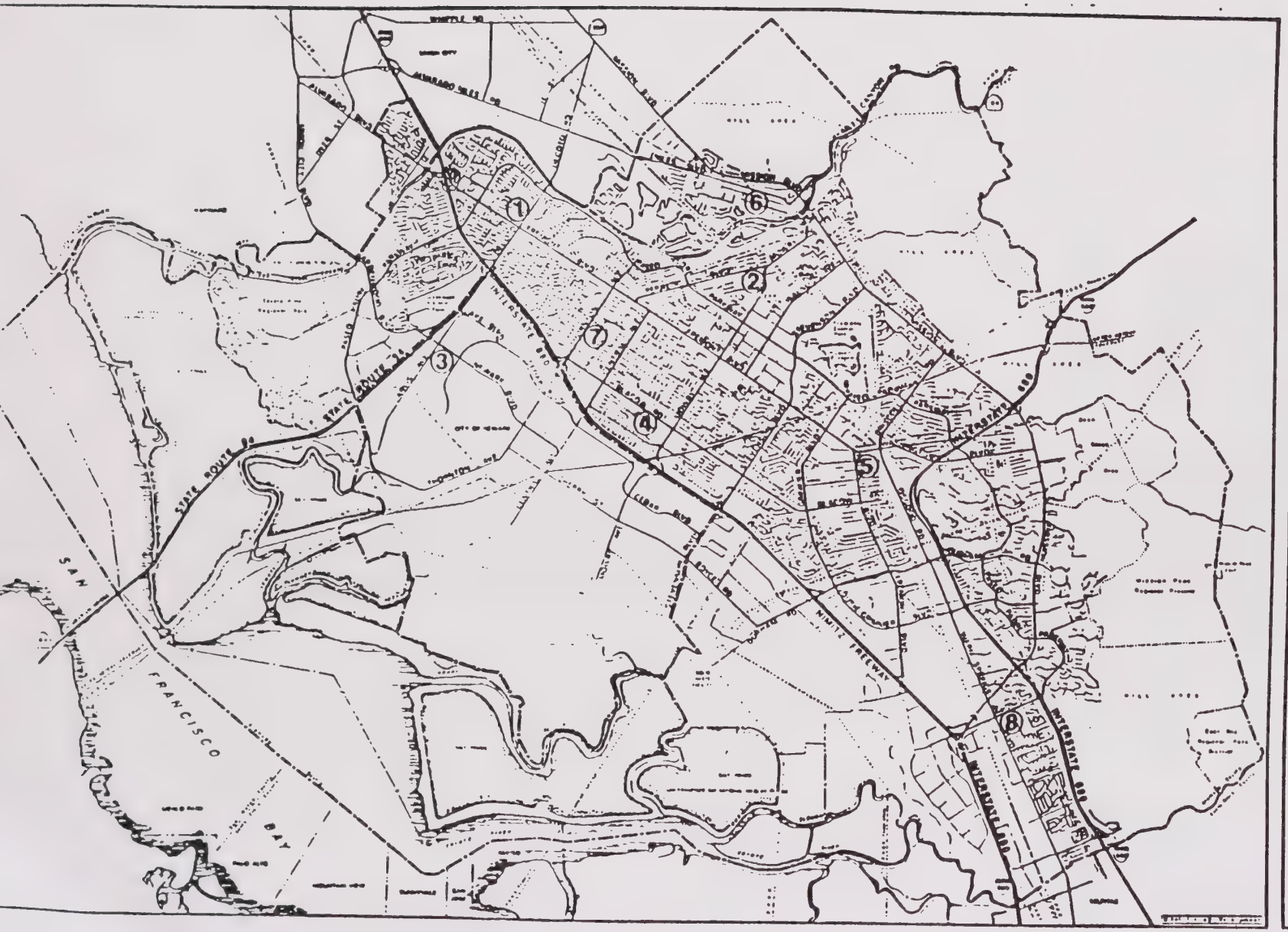
17. Estimated range of rents for Fremont is taken from an unpublished survey of rents in Fremont (available for review in the Community Development Department) and a survey of rents in the Centerville area conducted by Economics Research Associates

Appendix H-A.1

City of Fremont - Homeless Shelter Addresses

1. Tri-City Homeless Coalition (TCHC), 3763 Decoto Road.
2. Christ the King Lutheran Church, 1301 Mowry Avenue.
3. First Presbyterian Church, 35450 Newark Boulevard, City of Newark.
4. Holy Trinity Lutheran Church, 38801 Blacow Road.
5. Irvington Baptist Church, 41386 Fremont Boulevard.
6. Niles Congregational Church, 255 H Street.
7. St. James Episcopal Church, 38156 Thornton Avenue.
8. Warm Springs Southern Baptist Church, 111 Warren Avenue.

(Map on following page)



● FREMONT GENERAL PLAN UPDATE

CITY BASE MAP

Homeless Support Shelters

Key on Previous Page.

Project Name (Target Population)	Total Number of Units Constructed	Number of Affordable Units (at specified level)*	Date Units Available
Redwood Lodge (Disabled)	24 units	24 (Very low)	1989
Sequoia Manor (Elderly)	81 units	80 (Very low)	1989
Baywood Apartments (Families)	82 units	66 (Very low) 15 (Low)	Projected: 1990
S.A.V.E. Transitional Housing (Battered Women with children)	16 units	16 (Very low)	1988
SERRA (Developmentally disabled)	2 - group houses	2 (Very low)	Projected: 1990
Rubicon (Abused Children)	1 - group home	1 (Very low)	1989
Amber Court	168 units	34 (Low)	1985
Creekside Village	480 units	96 (Low)	1987
Crossroads	300 units	60 (Low)	1985

* Units specified as Low may be predominantly occupied by Very Low because priority is given to Section 8 Certificate holders and very low income households.

Project Name (Target Population)	Total Number of Units Constructed	Number of Affordable Units (at specified level)*	Date Units Available
Durham Greens	315 units	64 (Low)	1985
Heritage Village	192 units	39 (Very low)	1987
Mission Wells	225 units	45 (Low)	1986
Park Sequoia	248 units	50 (Low)	1985
Parkside Place	16 units	16 (Low)	1985
Regency Square	132 units	27 (Very low)	1987
Woodcreek	96 units	60 (Low)	1985

* Units specified as Low may be predominantly occupied by Very Low because priority is given to Section 8 Certificate holders and very low income households.

Appendix H-A.3

Estimated Current Cost of Preserving Units At Risk of Losing Use Restrictions 1996 - 2000

Project Name/ Target Population	Subsidy Type	Assumed Method of Preservation	Assumed Cost/Unit Based on Comps	Rehabilitation and Soft Costs • soft 3% purchase • rehab $2,500/unit	Total Preservation Cost/Unit	Number of Units	Total Replacement Cost/Project
Park Sequoia	Mortgage Revenue Bonds	Voluntary retention of some BMR units/ accept Section 8	N/A	N/A	0	50	0
Mission Wells Apts.	Mortgage Revenue Bonds	Voluntary retention of some BMR units/ accept Section 8	N/A	N/A	0	45	0
Creekside Village Apts.	Mortgage Revenue Bonds	Voluntary retention of some BMR units/ accept Section 8	N/A	N/A	0	96	0
Rancho Luna Seniors/Disabled	Section 8 new construction	Renew Section 8/ acquisition	$50,000	$4,000	$54,000	26	$1,404,000
Rancho Sol Seniors	Section 8 new construction	Renew Section/ acquisition	$50,000	$4,000	$54,000	12	$648,000
Total Estimated Preservation Cost of All Units At Risk 1996-2000							$2,052,000

Appendix H-A.3

Estimated Current Cost of Replacement of Units At Risk of Losing Use Restrictions 1996 - 2000

Project Name/ Target Population	Assumed Type of Construction	Assumed Density	Assumed Average SF per Unit	Assumed Cost per SF Hard & Soft	Assumed Land Cost per Unit	Total Replacement Cost/Unit	Number of Units	Total Replacement Cost/Project
Park Sequoia	Woodframe 3 story	20 units per acre	800 SF	$80 SF	$30,000	$94,000	50	$ 4,700,000
Mission Wells Apts.	Woodframe 3 story	20 units per acre	800 SF	$80 SF	$30,000	$94,000	45	$ 4,230,000
Creekside Village Apts.	Woodframe 3 story	20 units per acre	800 SF	$80 SF	$30,000	$94,000	96	$ 9,024,000
Rancho Luna Seniors/Disabled	Woodframe 3 story elevator	20 units per acre	600 SF	$85 SF	$30,000	$81,000	26	$ 2,106,000
Rancho Sol Seniors	Woodframe 3 story elevator	20 units per acre	600 SF	$85 SF	$30,000	$81,000	12	$ 972,000
Total Estimated Replacement Cost of All Units At Risk 1996-2000								$21,032,000

Appendix H-A.3

Estimated Current Cost of Preserving Units At Risk of Losing Use Restrictions 1991 - 1995

Project Name/ Target Population	Subsidy Type	Assumed Method of Preservation	Assumed Cost/Unit Based on Comps	Rehabilitation and Soft Costs • soft 3% purchase • rehab $2,500/unit	Total Preservation Cost/Unit	Number of Units	Total Preservation Cost/Project
Sundale Arms Seniors/Families	Section 236	Acquisition	$60,000	$4,300	$64,300	132	$8,487,600
Willow Creek Apts.	Mortgage Revenue Bonds	Voluntary retention of some BMR units/ accept Section 8	N/A	N/A	0	47	0
Durham Greens Apts.	Mortgage Revenue Bonds	Voluntary retention of some BMR units/ accept Section 8	N/A	N/A	0	64	0
Total Estimated Preservation Cost of All Units At Risk 1991-1995							$8,487,600

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Appendix H-A.3

Estimated Current Cost of Replacement of Units At Risk of Losing Use Restrictions 1991 - 1995

Project Name/ Target Population	Assumed Type of Construction	Assumed Density	Assumed Average SF per Unit	Assumed Cost per SF Hard & Soft	Assumed Land Cost per Unit	Total Replacement Cost/Unit	Number of Units	Total Replacement Cost/Project
Sundale Arms Seniors/Families	Woodframe 3 story	20 units per acre	800 SF	$80 SF	$30,000	$94,000	132	$12,408,000
Willow Creek Apts.	Woodframe 3 story	20 units per acre	800 SF	$80 SF	$30,000	$94,000	47	$ 4,418,000
Durham Greens Apts.	Woodframe 3 story	20 units per acre	800 SF	$80 SF	$30,000	$94,000	64	$ 6,016,000
Total Estimated Replacement Cost of All Units At Risk 1991-1995								$22,942,000

Appendix H-A.3

Inventory of Units at Risk of Losing Use Restrictions
1996 - 2000

Project Name/ Target Population	Address	Owner Type	Subsidy Type/ Year Built	Number of Low Income Units	Income Level Served	Earliest Date of Change from Low Income Use	Event Changing Project from Low Income Use
Park Sequoia	3190 Red Cedar Terr.	Private	Mortgage Revenue Bonds 1985	50	80% median	2/5/96	Contract Expiration
Mission Wells Apts.	39115 Guardino Ave.	Private	Mortgage Revenue Bonds 1985	45	70% median	5/11/97	Contract Expiration
Creekside Village Apts.	2999 Sequoia Terr.	Private	Mortgage Revenue Bonds 1987	96	70% median	1/4/98	Contract Expiration
Rancho Luna Seniors/Disabled	3939 Monroe Ave.	Private	Section 8 New Construction 1982	26	50% median	5/23/00	Contract Expiration
Rancho Sol Seniors	3599 Pennsylvania Ave.	Private	Section 8 New Construction 1982	12	50% median	5/23/00	Contract Expiration

Appendix H-A.3

Inventory of Units at Risk of Losing Use Restrictions
1991 - 1995

Project Name/ Target Population	Address	Owner Type	Subsidy Type/ Year Built	Number of Low Income Units	Income Level Served	Earliest Date of Change from Low Income Use	Event Changing Project from Low Income Use
Sundale Arms Seniors/Families	39150 Sundale Dr.	Private	Section 236	132	50% median	1/1/95	Opt-out
Willow Creek Apts.	231 Woodcreek Com.	Private	Mortgage Revenue Bonds 1985	47	80% median	2/18/95	Contract Expiration
Durham Greens Apts.	43555 Grimmer Blvd.	Private	Mortgage Revenue Bonds 1985	64	70% median	11/17/95	Contract Expiration

INCREASED DWELLING UNIT POTENTIAL, 1984-1988
BY GENERAL PLAN AMENDMENTS AND OTHER ACTIONS

HIGHER/LOWER DENSITY ACTION	LOCATION	ACRES	FROM	TO	NET GAIN OR (LOSS) OF DWELLING UNITS
GPA 85-3	Beard Rd (2987,3027,3003,3025)	12.65	Res.3-5	Res.5-7	25
GPA 86-4	Beard Rd, adj. to Hello Way	14.83	Res.3-5	Res.5-7	30
GPA 86-10	Harris Pl (40)	1.92	Res.15-18	Res.27-35	28
GPA 86-15	Fremont Bl/Bancinada Dr	3.1	Res.15-18	Res.11-15	(11)
GPA 87-7	Mowry Ave	15.82	Res.5-7/Res.15-18	Res.11-15/Res.23-27	123
GPA 87-21A	E. Warren Ave and Route 680	2.27	Res.5-7	Res.1-2.3	(10)
GPA 87-21B	E. Warren Ave and Route 680	6.73	Res.5-7	Res.1-2.3	(29)
GPA 87-22	Mission Bl and Pickering Ave	2.6	Res.15-18	Res.4-6	(30)
GPA 88-1	Laurel St (4243)(Victoria Gardens)	2.43	Res.18-23	Res.27-35	26
GPA 88-7	Cherry Ln between Spetti and Spense	5.39	Res.3-5	Res.5-7	11
				GAIN =	243
				LOSS =	80
				NET GAIN =	+163

CONVERSION ACTION	LOCATION	ACRES	FROM	TO	NET GAIN OR (LOSS) OF DWELLING UNITS
GPA 86-5	Mission Bl and Driscoll Rd	1.44	Res.3-5	Office Comm	(6)
GPA 86-6	Between Mission Bl, Hillside Ave, Santa Fe tracks, and King Ave	34	Industrial	Res.6.5-10	281
GPA 87-9	Mission Bl	1	Hill Face Open Space	Res.5-7	6
GPA 87-10	Niles Bl and Rock Ave	2.5	Res.15-18	Retail Comm	(41)
GPA 87-16	King Ave, next to Southern Pacific tracks and Union City boundry	10.96	Industrial	Res.6.5-10	712
GPA 87-20	Stanford Rd and end of Raindance Rd	20.7	Open Space	Res..5-1.5	21
GPA 88-9	G Street (353)	2	Res.6.5-10	Institutional Open Space	(33)
				GAIN =	1020
				LOSS =	80
				NET GAIN =	+940

RESIDENTIAL HIGHER/LOWER DENSITY GAIN =	+163
RESIDENTIAL CONVERSION DENSITY GAIN =	+940
TOTAL DWELLING UNIT POTENTIAL INCREASE =	+1103